

**(E-Procurement Tender Notice)**

**Tender Schedule**

**For**

**Design, Supply, Installation, Testing and commissioning of 1200KWp Grid  
Connected Ground Mounted power plants at 8 locations of each 150KWp at Vijaya  
Dairy plants of TSDDCFL, Telangana under RESCO mode**

**Tender Notice No: - TSREDCO/SE/SPV/Govt./VIJAYA DAIRY-  
1200KWp/RESCO/2020,Dated.09.11.2020**

**CLOSING DATE: 26.11.2020 AT 5.00 PM**



**TELANGANA STATE RENEWABLE ENERGY DEVELOPMENT CORPORATION LTD  
(TSREDCO)**

**Corporate Office: D. No. 6-2-910, Visvesvaraya Bhavan,  
The Institution of Engineers Building, Khairatabad, Hyderabad - 500 004.  
Telangana State, India**

**PHONE: 040-23201502, 23201503, FAX : 040-23201504**

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**Web site: [tsredco.telangana.gov.in](http://tsredco.telangana.gov.in)**

**Contents**

<b>Description</b>	<b>Page No.</b>
Website advertisement	3
Section I - Invitation For Bids (IFB)	4-10
Section II - Instructions to the bidder (ITB) & General Conditions	11-31
Section III - Tender Schedule	32-36
Section IV - Bid Evaluation and Selection of Projects	37-40
Section V - Technical Specifications	41-64
Section VI - Other Provisions	65-67
Section VII - Financial Bid	68-69
Section VIII - Sample Forms and Formats For Bid Submission	70-91
Section IX - Draft PPA	92-142
Section X - Draft Escrow Agreement	143-165

**Website advertisement**



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PHONE: 040-23201502, 23201503, FAX : 040-23201504

Online tenders are hereby invited from interested and eligible bidders for "Design, Supply, Installation, Testing and commissioning of 1200KWp Grid Connected Ground Mounted power plants at 8 locations of each 150KWp at Vijaya Dairy plants of TSDDCFL, Telangana under RESCO mode". Interested bidders can download the bids online from 10.11.2020 and submit the same, from 21.11.2020 to 26.11.2020 till 05:00PM through [www.tender.telangana.gov.in](http://www.tender.telangana.gov.in). For further details please visit our website: <https://tsredco.telangana.gov.in>

**Date:09.11.2020**

VC & MD,  
TS REDCO



SECTION - I

# INVITATION FOR BIDS (IFB)

Tender Notice  
SECTION - I: INVITATION FOR BIDS (IFB)

1. **Name of Work: Design, Supply, Installation, Testing and commissioning of 1200KWp Grid Connected Ground Mounted power plants at 8 locations of each 150KWp at Vijaya Dairy plants of TSDDCFL, Telangana under RESCO mode under Net-metering Scheme.**

**Bid Document No: TSREDCO/SE/SPV/Govt./VIJAYA DAIRY-1200KWp/RESCO/2020, Dt.09.11.2020**

2. **Background:** Government of Telangana through G.O.MS.No.25, Dated. 03.09.2015 nominated Telangana State Renewable Energy Development Corporation Limited as Nodal Agency for implementation of New & Renewable Energy Programs in the state of Telangana.

The Govt. of Telangana has announced Telangana Solar Power Policy 2015 with provisions for promotion of Grid connected Solar Rooftop systems with net metering/gross metering option to the consumers. The following are the provisions for promotion of grid connected solar rooftop TS. Solar Power Policy 2015,

- The Government will promote solar rooftop systems on public buildings, domestic, commercial and industrial establishments.
- The consumers are free to choose either net or gross meter option for sale of power to DISCOM and the applicable tariff for either of the cases shall be equal to average Cost to Service of the DISCOM which will be determined by TSERC every year.
- Permission will be given to the group of persons / society to set up solar power projects and will be treated as collective generation for supply of power to the households of each society / group member.
- Time bound clearance of proposals through online mode.

The DISCOMs have issued the implementation guidelines based on the promotion policy announced by the GoTS.

On behalf of consumers under this scheme therein, TSREDCO is inviting e-bids from interested bidders for Design, Supply, Installation, Testing and Commissioning Rooftop/ Ground Mounted / High Raised Structure Solar Photo Voltaic Power Plants under Net-metering Scheme on “Build Own Operate” (B-O-O) basis at **1200KWp Grid Connected Ground Mounted power plants at 8 locations of each 150KWp at Vijaya Dairy plants of TSDDCFL in Telangana State under RESCO Mode.** The Power

Purchaser and TSREDCO shall enter into a Power purchase Agreement (PPA) separately with the successful or empanelled Bidder/Bidders selected based on this tender **through TSREDCO** for purchase of Solar Power for a period of 25 years based on the terms, conditions and provisions of the tender bid.

Any amendment(s)/ corrigendum/clarification(s) with respect to this Tender shall be uploaded on the e-Procurement website only. The bidders should keep themselves updated by regularly visiting the Telangana E-Procurement website and TSREDCO website for any amendment/ corrigendum/ clarification in regard to this Tender.

**3. OVERVIEW OF THE TENDER BID:-**

The successful Bidder/Bidders shall set up a **1200KWp Grid Connected Ground Mounted power plants at 8 locations of each 150KWp at Vijaya Dairy plants of TSDDCFL, Telangana** in Telangana State. Solar PV Project on Build Own Operate (BOO) basis in accordance with the provisions of this tender bid document and standard Power Purchase Agreement (PPA). PPA formats shall be provided at the time of LOI/Work Agreement.

Power Purchaser/TSREDCO shall enter into PPA or LOC with successful bidders for a period of 25years, from the date as per the provisions of PPA. The tariff payable to the Power Producer is fixed for 25 years. This shall be inclusive of all statutory taxes, duties, levies, cess applicable as on the last date of bid submission.

4. Bidders shall submit their bid by offering a single tariff for the Project applied for, which shall be applicable for all the 25 years in the respective of category.
5. If the Project is transferred or sold to a third party during its tenure (after initial lock-in period of 1 year after COD), TSREDCO will retain full rights to operationalize the PPA with the third party, which will be under full obligation to honour all the obligations and terms & conditions of the PPA.

**6. SELECTION TECHNOLOGY & ELIGIBLE PROJECTS UNDER THIS TENDER BID**

The Projects provide for deployment of Solar PV Technology. However, the selection of projects would be technology agnostic within the technology mentioned above. Crystalline Silicon, with or without Trackers can be installed. Only commercially established and operational technologies can be used, to minimize the technology risk and to achieve the timely commissioning of the Projects.

7. TSREDCO shall conduct negotiations, if required or as per provisions of tender bid document.

8. TSREDCO reserves the right to cancel/withdraw this invitation for bids without assigning any reason and shall bear no liability whatsoever consequent upon such a decision.

**DISCLAIMER:**

1. Telangana State Renewable Energy Development Corporation Limited (TSREDCO) reserves the right to modify, amend or supplement this document including all formats and Annexures.
2. While this document has been prepared in good faith, neither TSREDCO nor their employees or advisors make any representation or warranty, express or implied, or accept any responsibility or liability, whatsoever, in respect of any statements or omissions herein, or the accuracy, completeness or reliability of information, and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of this tender document, even if any loss or damage is caused by any act or omission on their part.

**Definitions:**

In the “Bid / Tender / Contract Document” as herein defined where the context so admits, the following words and expression will have the following meaning:

1. “Affiliate” shall mean a company that either directly or indirectly
  - a. controls or
  - b. is controlled by or
  - c. is under common control witha Bidding Company (in the case of a single company) and “control” means ownership by one company
2. “MNRE” shall mean Ministry of New & Renewable Energy
3. “B.I.S” shall mean specifications of Bureau of Indian Standards (BIS);
4. “Bid / Tender” shall mean the Techno Commercial and the Price/Financial Bid submitted by the Bidder along with all documents/credentials/attachments, formats, etc., in response to this Bid Document, in accordance with the terms and conditions hereof.
5. “Bidder / Tenderer” shall mean Bidding Company submitting the Bid. Any reference to the Bidder includes Bidding Company including its successors, executors and permitted assigns jointly and severally, as the context may require”;
6. “B-O-O” shall mean Build Own Operate;
7. “EMD” shall mean the unconditional and irrevocable online payment/ banker cheque/ demand draft to be submitted along with the Bid by the Bidder under ITB Clause of this Bid;

8. "Bidding Company" shall refer to such single/consortium company that has submitted the Bid in accordance with the provisions of this Bid;
9. "Bid Deadline" shall mean the last date and time for submission of Bid in response to this Bid as specified in Bid Information Sheet and as specified in ITB of this Bid document including all amendments thereto;
10. "Bid Document" shall mean all Definitions, Sections, Layouts, Drawings, Photographs, Formats & Annexure etc. as provided in this bid including all the terms and conditions hereof.
11. "Chartered Accountant" shall mean a person practicing in India or a firm whereof all the partners practicing in India as a Chartered Accountant(s) within the meaning of the Chartered Accountants Act, 1949
12. "Competent Authority" shall mean Vice Chairman & Managing Director (VC&MD) of TSREDCO himself and/or a person or group of persons nominated by VC&MD for the mentioned purpose herein;
13. "Company" shall mean a body incorporated in India under the Companies Act, 2013;
14. "Contract" means the agreement entered into between the Employer and the Contractor/successful bidder, as recorded in the Contract Form signed by the parties, including all the attachments and appendices thereto and all documents incorporated by reference therein;
15. "Contract Price / Contract Value" shall mean the sum accepted or the sum calculated in accordance with the prices accepted in Bid.
16. "Completion of Work" means that the Project/Works have been completed operationally and structurally has been attained as per Technical Specifications.
17. "Contract Document" shall mean collectively the Bid Document, Design, Drawings, and Specifications, Annexures, agreed variations, if any, and such other documents consisting the bid and acceptance thereof;
18. "CMC" means Comprehensive Maintenance Contract (CMC)
19. "Day" means calendar day;
20. "Employer" or "TSREDCO" shall mean Telangana State Renewable Energy Development Corporation Limited, Hyderabad.
21. "Eligibility Criteria" shall mean the Eligibility Criteria as set forth in Section III: Technical & Special Conditions of Contract of this BID;
22. "Effective Date" means the date from which the time the supply of power is commenced to the Power Purchaser;
23. "GCC" means the General Conditions of Contract contained in this section;
24. "Goods" means permanent plant, equipment, machinery, apparatus, articles and things of all kinds to be provided and incorporated in the Works by the Contractor under the Contract but does not include Contractor's Equipment;.



25. "Guarantee Test(s)" means the test(s) specified in the Technical Specification to be carried out to ascertain whether the Project/Works is able to attain the functional requirements specified in the Technical Specifications.
26. "IEC" shall mean specifications of International Electro-Technical Commission;
27. "IFB" Shall mean Information for Bidder
28. "ITB" shall mean Instructions to Bidder
29. "NIT" Shall means Notice Inviting Tender
30. "Parent Company" shall mean a company that holds paid-up equity capital directly or indirectly in the Bidding Company, as the case may be;
31. "Price/Financial Bid" shall mean separate Envelope, containing the Bidder's Quoted Price as per the format prescribed in Section-III (Technical & Special Conditions of Contract) of this BID.
32. "Qualified Bidder" shall mean the Bidder(s) who, after evaluation of their Techno Commercial Bid as per Eligibility Criteria set forth in Section III: Technical& Special Conditions of Contract of this BID stand qualified for opening and evaluation of their Price/Financial Bid;
33. "RC" shall mean Rate Contract
34. "SNA" shall mean State Nodal Agency
35. "Statutory Auditor" shall mean the auditor of a Company appointed under the provisions of the Companies Act, 2013 or under the provisions of any other applicable governing law;
36. "Services" means those entire services ancillary to the supply of the products, to be provided by the Contractor under the Contract; e.g. transportation (including Loading, unloading and transfer to Site) and provision of marine or other similar insurance, inspection, expediting, carrying out guarantee tests, operations, maintenance etc.
37. SPD shall means "Solar Power Developer"
38. "Successful Bidder(s) / Contractor(s)" shall mean the Bidder(s) selected by Employer pursuant to this Bid i.e. on whom award is made.
39. "Standards" shall mean the standards mentioned in the technical specification of the goods and equipment utilized for the Work or such other standard which ensure equal or higher quality and such standards shall be latest issued by the MNRE.
40. "Time for Completion" means the time within which Completion of the Project/Works is to be attained as per the respective PO/ LOI/LOI or the relevant provisions of the contract;
41. "TSREDCO" means Telangana State Renewable Energy Corporation Limited
42. "Work" means the "Goods" to be supplied, as well as all the "Services" to be carried out under the Contract;

**INTERPRETATIONS:**

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



## SECTION - II

# INSTRUCTIONS TO THE BIDDER (ITB) AND GENERAL CONDITIONS

**SECTION - II**

**Instructions to the Bidder (ITB) and General Conditions**

**2.0) INTRODUCTION:**

- ❖ The project will be given to L1 bidder in preferential order.
- ❖ Higher experience will be taken into consideration, if same price / tariff quoted by more than one bidder.
- ❖ Reverse Auction of the short-listed bidder.

**2.1 BID INFORMATION SHEET**

The brief details of the tender bid are as under:

Bid Document No.	TSREDCO/SE/SPV/Govt./VIJAYA DAIRY-1200KWp/RESCO/2020/ Dt. 09.11.2020
Bid Document fee (Non refundable)	Rs.59,000/- incl. 18% GST (By way of DD from any Scheduled Bank in favour of TS REDCO, payable at Hyderabad)
EMD / Bid Security Deposit	Bid Bond (EMD) for Rs.9,00,000/- (Nine lakhs) by way of Demand Draft/BG in favor of TSREDCO. Firms claiming Exemptions for EMD shall submit letter from NSIC/ MSME for this work specifically.
Performance security value	At the time of allocation of project, the bidder shall submit Performance Guarantee of Rs.43,00,000/- for 1200kWp system to take up the project under RESCO MODE. This Performance Guarantee amount shall be submitted in the form of DD for Rs. 43,00,000/- in favour of "TSREDCO, Hyderabad" OR Bank guarantee of Rs. 86,00,000/- from any nationalized/scheduled bank. The bank guarantee should be valid for a period of one year with claim period of additional 6months. No interest shall be paid by TSREDCO on the amount of security money deposit.
Minimum Eligibility Criteria	Valid Registered Suppliers with TSREDCO with requisite experience of at least minimum 200KWp capacity at single site under Net metering in field of Grid Connected Solar PV systems in any one (1) FY in the last 3 Years (i.e. FY 2017-18, 2018-19 and 2019-20)
Minimum Eligibility Financial Criteria	The bidder shall submit the Solvency certificates from banks etc.) of not less than Rs.5.00 crores

Bid Documents available from	10.11.2020
Pre Bid Conference	20.11.2020 at 2:00 PM at Office of the TSREDCO, # 6-2-910, Visvesvaraya Bhavan, The Institution of Engineers Building, Khairatabad, Hyderabad, 500 004. Telangana State, India
Bid Document uploading start date	21.11.2020 at 2.00 PM onwards
Bid Document Downloading End Date	26.11.2020 till 05.00 PM
Last date for uploading of online documents	26.11.2020 till 05.00 PM
Last date for submission of Hard copies of documents uploaded online	27.11.2020 till 05.00 PM at Office of the TSREDCO, D. No. 6-2-910, Visvesvaraya Bhavan, The Institution of Engineers Building, Khairatabad, Hyderabad, 500 004. Telangana State, India
Pre-qualification & Technical Bid opening date/time	28.11.2020 at 11:00 AM.
Price Bid opening date/time	03.12.2020 at 03:00 PM
Validity of Tender	<b>Valid for 90 Days from the date of finalization</b>
Contact person	General Manager / Project Director (Solar), TSREDCO, Hyderabad
Tender to be addressed to	<b>Vice Chairman &amp; Managing Director Telangana State Renewable Energy Development Corporation Ltd (TSREDCO), D. No. 6-2-910, Visvesvaraya Bhavan, 2<sup>nd</sup> floor, The Institution of Engineers Building, Khairatabad, Hyderabad - 500 004. Telangana State, India Ph: 040 - 23201502, 23201503./ Fax: 040 - 23201504 Email: se@tsredco.telangana.gov.in</b>

**Important Note:**

Bidder shall submit bid proposal along with Bid Document fee and EMD, complete in all respect as per the Bid Information Sheet. Technical bids will be opened in presence of authorized representatives of bidders who wish to be present.

TSREDCO have right to reject the bidding process at any stage or right to cancel the tender without mentioning any reason. In the event of any date indicated above is a declared Holiday, the next working day shall become operative for the respective purpose mentioned herein.

Bid documents which include Eligibility criteria, “Technical Specifications”, various conditions of contract, formats, etc. can be downloaded from Telangana e-procurement website <https://tender.telangana.gov.in/>

Any amendment(s)/corrigendum/clarifications with respect to this Bid will be uploaded on <https://tender.telangana.gov.in/> website and TSREDCO website [tsredco.telangana.gov.in](https://tsredco.telangana.gov.in) only. The Bidder should regularly follow up for any Amendment/Corrigendum/Clarification on the above website. No separate notifications will be issued for such notices/ amendments/ clarification etc. in the print media or individually.

1. Bids not accompanying the Bidding Document Cost and EMD, or those accompanied by these instruments of inadequate value, shall not be entertained and in such cases, the bids shall not be opened.

The Bidding Document Cost has to be necessarily submitted in the form of online payment mode of e tender portal or Demand Draft (DD)/Banker's Cheque in favour of "Telangana State Renewable Energy Development Corporation Ltd (TSREDCO)", issued by any scheduled/nationalized bank and payable at Hyderabad.

The EMD should be in the form of online payment mode of e tender portal or Banker's Cheque/DD in favour of "Telangana State Renewable Energy Development Corporation Ltd (TSREDCO)," payable at Hyderabad. The validity of the EMD shall be as per the Bid information sheet.

The details of the instruments of Bidding Document Cost and the EMD (Online/DD/Cheque as applicable) have to be entered online in relevant fields/columns of the module while submitting the e-bid. It must be ensured by the bidder that the original instruments towards Bidding Document Cost and EMD are received by TSREDCO before opening time of the Technical bids for verification of the details of the same as given online by the bidder. Failure to comply with this would render the bid liable for rejection and the bid will not be opened online. TSREDCO will not be responsible for any delay, loss or non-receipt of Bidding Document Cost or EMD sent by post/courier.

Any relaxation/exemption sought by bidders shall only be considered in accordance with relevant clauses Section-II (ITB) regarding submission/payment of EMD and Bidding Document Cost and shall be subject to fulfillment of conditions defined in the said clauses. Since all the conditions explained in the said clauses for seeking exemption from submission of Bidding Document Cost and EMD are self-explanatory, bidders should ascertain about their fulfillment of all conditions and submit their bid accordingly. If at any stage, it is found that false information is furnished or non-compliance of any of the conditions defined at the said clauses, the bid/offer shall be considered as non-responsive and would not be considered for further evaluation. Bidder seeking exemption from submission of the Bidding Document Cost and the EMD has to mandatorily submit/upload the scanned copy of their valid original registration certificate(s) as asked for in the relevant, clause along with other relevant documents as part of their online bid.

2. TSREDCO reserves the right to cancel / withdraw the tender without assigning any reason whatsoever and in such a case, no bidder / intending bidder shall have any claim arising out of such action.

3. The subject procurement will be done through e-tendering. The Bid document is available on Telangana e-tender website <https://tender.telangana.gov.in/> or on TSREDCO website's Home Page <https://tsredco.telangana.gov.in>. The Tender submission, Tender closing and opening will be done electronically and online.

## **2.2 PROJECT LOCATION:**

The locations are as follows:

Sl.No	Location	Capacity in KWp
1	Vijaya Diary MCC, Narayankhed(vill), Sanga Reddy Dist.,	150
2	Vijaya Diary, Siddipet Town, Siddipet Dist.,	150
3	Vijaya Diary, Medak Town, Medak Dist.,	150
4	Vijaya Diary, Shadnagar Town, Ranga Reddy Dist.,	150
5	Vijaya Diary, Kamareddy Town, Kama Reddy Dist.,	150
6	Vijaya Diary, Khammam Town, Khammam Dist.,	150
7	Vijaya Diary, Nizamabad Town, Nizamabad Dist.,	150
8	Vijaya Diary, Warangal Town, Warangal Urban.,	150
	Total	1200

The interested Bidders are required to participate in the tender bid for installation of Solar Photovoltaic Power Projects on Build-Own-Operate (B-O-O) basis under the RESCO mode.

## **2.3 PROJECT SCOPE & TECHNOLOGY SELECTION**

Following conditions shall be applicable to the Bidders for submission of bids against this bid.

- (i) A Bidder including its Parent, Affiliate or Ultimate Parent or any Group Company shall either submit a single bid.
- (ii) The evaluation of bids shall be carried out as described in Section-IV of bid. The methodology for Allocation of Projects is elaborated in Section-V of bid.

## **2.4 CONNECTIVITY WITH THE EXISTING 230V/440V/11 KV LINE**

2.4.1 Refer Section-V of the bid.

## **2.5 POWER GENERATION BY SOLAR POWER DEVELOPER**

### **2.5.1 CRITERIA FOR GENERATION**

The SPD will declare the annual CUF of the Project at the time of submission of response to tender bid, which shall be allowed to be modified at the time of signing of PPA.

Thereafter, the CUF for the Projects shall remain unchanged for the entire term of the PPA. The declared annual CUF shall in no case be less than 15%. SPD shall maintain generation so as to achieve annual CUF of minimum 15% value till the end of the PPA duration of 25 years. The lower limit will, however, be relaxable by TSREDCO to the extent of non-availability of grid for evacuation which is beyond the control of the SPD. The annual CUF will be calculated every year from 1st April of the year to 31st March next year.

**2.5.2 SHORTFALL IN GENERATION**

If for any Contract Year, it is found that the SPD has not been able to generate minimum energy corresponding to the value of annual CUF within the permissible lower limit of CUF declared by the SPD, on account of reasons solely attribute to the SPD, such shortfall in performance shall make the SPD liable to pay the compensation of tariff to beneficiary Dept. of Rs/unit discovered through this tender as payable by beneficiary Dept. This will, however, be relaxable by beneficiary Dept. to the extent of non-availability of grid for evacuation which is beyond the control of the developer or due to non-availability of Load. The SPD is, however, free to deploy storage solution complying with the standard and codes as mentioned in tender bid document. This compensation shall be applied to the amount of shortfall in generation during the Contract Year. In case the eventuality of Back down due to non-availability of Load or non-availability of grid, SPD shall be eligible for minimum generation compensation, in the manner detailed below.

**Off take constraints due to Back down and Un-availability of Load:**

<b>Duration of Breakdown</b>	<b>Provision of Generation Compensation</b>
Hours of <b>Breakdown</b> during a monthly billing cycle	Minimum Generation Compensation = 50% of [(Average Generation per hour during the month) x (number of <b>Breakdown</b> hours during the month)] x PPA Tariff x Breakdown Capacity. Where, Average Generation per hour during the month (kWh) = Total Generation in the month (kWh) / Total hours of generation in the month.
<b>Duration of Load Unavailability</b>	<b>Provision of Generation Compensation</b>
Hours of Load Unavailability during a monthly Bill cycle	<p>Minimum Generation Compensation = 50% of (Estimated generation based on radiation of the month measured - Actual generation)x PPA Tariff</p> <ul style="list-style-type: none"> <li>Any outage hours of plant will not considered for this calculation</li> </ul> <p>Beneficiary shall pay for such generation loss at the PPA tariff so as to offset this loss. In case if there is no generation in a contract year, generation in the previous contract year shall be considered for the purpose of calculation.</p>



The Generation Compensation is to be paid as part of the energy bill for the successive month after receipt of JMR.

However, this compensation shall not be applicable in events of Force Majeure identified under the PPA with beneficiary Dept., affecting supply of solar power by the SPD.

2.5.3 The SPD would be free to install DC solar field and storage system as per his design of required output and considering connected Load, including his requirement of auxiliary consumption, conforming to codes and standards provided in this document.

### **3. EARNEST MONEY DEPOSIT (EMD)**

3.1 Earnest Money Deposit (EMD) of INR as mentioned in Bid Information sheet per Project in the form of Bank Guarantee according to Format in favour of Telangana State Renewable Energy Development Corporation Ltd, (TSREDCO) and valid for **09 months** from the last date of bid submission, shall be submitted by the Bidder along with their bid, failing which the bid shall be summarily rejected. The Bank Guarantees towards EMD have to be issued in the name of the Bidding Company/ Lead Member of Bidding Consortium.

3.2 The Bidder shall furnish the DD/Bank Guarantees towards EMD from any of the any nationalized Banks.

#### **Please note that:**

I. Vendors registered with NSIC/MSME under single point registration scheme certificate may be given exemption from EMD for all tenders of TSREDCO subject to following conditions:

- a. An exclusive NSIC/MSME certificate for this tender mentioning the tender document name and number along with date
- b. NSIC /MSME Certificate must be valid for 3 months from the date of Bid-Opening, However tender fee is not exempted

#### **The EMD may be forfeited if:**

- a. If the bidder withdraws its bid during the period of bid validity as specified in the bid.
- b. If the bidder does not accept computational/arithmetical error correction made by TSREDCO and as explained in “Financial Evaluation” section of the Bid document.
- c. If the bidder does not accept assumptions, estimations etc. used for evaluation of bids as specified by TSREDCO in tender documents and revision of his bid accordingly, in case other assumptions are used. If the bidder does not accept the sharing as specified in the bid.
- d. In the case of successful bidder, if the bidder fails within the specified time limit:
  - To sign the contract agreement within 15 days of placement of Lol/Award letter.
  - To furnish the required performance guarantee, in accordance with the tender document.

**4 PERFORMANCE BANK GUARANTEE (PBG)**

4.1 Bidders selected by TSREDCO based on this tender, the bidder shall submit Performance Guarantee of Rs.43,00,000/- for 1200kWp system to take up the project under RESCO MODE within 15 days from date of issuance of Letter of Award (LoA) or before signing of PPA, whichever is earlier. This Performance Guarantee amount shall be submitted in the form of DD for Rs. 43,00,000/- in favour of "TSREDCO, Hyderabad" OR Bank guarantee of Rs. 86,00,000/- from any nationalized/scheduled bank. The bank guarantee should be valid for a period of one year with claim period of additional 6months. No interest shall be paid by TSREDCO on the amount of security money deposit. On receipt and after successful verification of the total Performance Bank Guarantee in the acceptable form, the DD/BG submitted towards EMD shall be returned by TSREDCO to the successful Bidder.

In case of delays in submission of PBGs, the signing of PPA shall be extended until the submission of the PBG by the SPD. In such cases, the Effective Date of the PPA shall remain unchanged. Further, the validity of the Bank Guarantee(s) against EMD submitted by the Bidder shall have to be maintained by the SPD, until the submission of PBG. In the event of non-submission of PBG by the date of expiry of the EMD, the EMD submitted for the Project shall be encashed by the TSREDCO, and the Project shall stand terminated.

4.2 All Performance Bank Guarantees (PBGs) shall be submitted on the name of TSREDCO.

4.3 **The SPD shall furnish the PBG from any nationalized Banks at Schedule of draft PPA to Beneficiary Dept. through TSREDCO.**

4.4 The format of the Bank Guarantees prescribed in the Formats (EMD) and (PBG) shall be strictly adhered to and any major deviation from the above Formats shall result in rejection of the EMD/ PBG and consequently, the bid. In case of deviations in the formats of the Bank Guarantees, the corresponding PPA shall not be signed.

4.5 The successful Bidder for the Projects selected based on this tender bid are required to **sign PPA with Beneficiary Dept. and TSREDCO** within 30 days after the issue of LoA. In case, TSREDCO offers to execute the PPA Between beneficiary Dept. and the Selected Bidder and if the Selected Bidder does not submit the requisite documents as per Clause, Section-II, Instructions to Bidders (ITB) of tender document or does not meet eligibility criteria upon submission of documents or does not execute the PPA within the stipulated time period, then the Bank Guarantee equivalent to the amount of the EMD shall be encashed by TSREDCO from the Bank Guarantee available with TSREDCO (i.e. EMD

or PBG) as liquidated damages not amounting to penalty, the selected Project shall stand cancelled and the selected Bidder expressly waives off its rights and objections, if any, in that respect.

4.6 The Bank Guarantees have to be executed on non-judicial stamp paper of appropriate value as per Stamp Act relevant to the place of execution.

4.7 All expenditure towards execution of Bank Guarantees such as stamp duty etc. shall be borne by the Bidders.

4.8 In order to facilitate the Bidders to submit the Bank Guarantee as per the prescribed format and in line with the requirements, checklist at Annexure has been attached. Bidders are advised to take note of the above checklist while submitting the Bank Guarantees.

4.9 After the bidding process is over, TSREDCO shall release the Bank Guarantees towards EMD of the unsuccessful Bidders within 15 days after the completion of the bidding process. The PBG of SPDs shall be returned to them, immediately after successful commissioning of their projects as per Terms of PPA, after taking into account any liquidated damages due to delays in commissioning as per Clause, Section-II, Instructions to Bidders (ITB) of tender bid.

## **5 TSREDCO ADMINISTRATIVE CHARGES:**

5.1 Successful / allotted Bidder shall have to pay administrative charges @ Rs.0.20 per unit generated per month plus 18% GST to TSREDCO. The payment has to be made by the SPD in the form of DD/ Pay Order/ NEFT/ RTGS within 3 days from date of receipt of bill from Beneficiary. Any delay in depositing the said amount to TSREDCO as mentioned above within the stipulated time shall attract interest @18% per annum, levied on per day basis, on the total Administrative charges, till (and including) the date of payment of Administrative charges.

## **6 POWER PURCHASE AGREEMENT (PPA)**

6.1 Beneficiary shall enter into Power Purchase Agreement (PPA) for this project with Bidder selected based on this bid through TSREDCO. A copy of Draft Power Purchase Agreement to be executed between the Beneficiary, TSREDCO and the selected SPD, is part of this Tender Document. The PPA shall be signed within 30 (Thirty) days from the date of issue of Lol (for e.g. If the LOI is dated 20.08.2020, then the last date of signing of PPA shall be 19.09.2020). The PPA shall be valid for a period of 25 years as per provisions of PPA.

6.2 The Performance Bank Guarantee as per Clause above shall be submitted by the SPD prior to signing of PPA of the project. Before signing of PPA with the selected Bidder for the project, TSREDCO will verify the documents furnished by the Bidder at the time of submission of response to bid including the shareholding of the Project Company along with a copy of complete documentary evidence supported with the original documents. Bidders will be required to furnish the documentary evidence for meeting the bid Qualification Requirement and financial requirements mentioned at Section-III of the bid. If at this stage it is found that the documents furnished by the Bidder are false/ misleading or misrepresented in any way then the provisions contained in this bid will be applicable.

6.3 Successful bidders will have to submit the required documents to TSREDCO within 21 days from the issue of Lol. In case of delay in submission of documents beyond the 21 days as mentioned above, TSREDCO shall not be liable for delay in verification of documents and subsequent delay in signing of PPA. Irrespective of the date of signing of PPA, the Effective Date of the PPA shall be the date as on 30th day from the date of issuance of LOI for the projects. In extraordinary cases of unavoidable delays on the part of Beneficiary Dept. in signing the PPAs, the Effective Date of the PPA shall then be the date of signing of PPA.

6.4 The SPDs will be free to reconfigure and repower the project from time to time during the PPA duration. However, beneficiary Dept. will be obliged to buy power only within the Capacity Utilization Factor (CUF) range laid down in Power Purchase Agreement (PPA) as per bid and PPA.

6.5 Any extension of the PPA period beyond 25 years shall be through mutual agreement between the SPDs and Beneficiary Dept. through TSREDCO.

6.6 The TSREDCO and the selected Bidder is required to open and maintain separately an Escrow account with an Escrow Agent in terms of the Escrow Agreement (Draft Escrow Agreement is part of the Tender Document).

The Parties (other than the Escrow Agent) will ensure that deposits shall be made in the Escrow Account in the mode and manner as per the Power Purchase Agreement proposed to be entered by the TSREDCO and the selected Bidder with the Power Purchaser.

Funds lying to the credit of the Escrow Account shall be released/transferred from the Escrow Account on the basis of written instructions by the TSREDCO to the selected Bidder (Power Producer) and to the TSREDCO as and when due as per the Power Purchase Agreement proposed to be entered by the TSREDCO and the selected Bidder with the Power Purchaser.

6.7 In case of termination of agreement (premature or after completion of 25 years), the SPD will remove the assets from beneficiary premises /land within 90 days, failing which, the infrastructure will be the property of Beneficiary Dept.

6.8 The Levellized Tariff of 25 years shall include all the costs related to above Scope of Work. Bidder shall quote for the entire facilities on a “single responsibility” basis such that the total Bid Price covers all the obligations mentioned in the Bidding Documents in respect of Design, Supply, Erection, Testing and Commissioning including Warranty, Operation & Maintenance (for a period of 25 years for RESCO), goods and services including spares required if any during O&M period. The Bidder has to take all permits like CEIG and other approvals and licenses, Insurance etc., provide training and such other items and services required to complete the scope of work mentioned above.

- The Levellized tariff is on lump sum turnkey basis and the bidder is responsible for the total Scope of work described above.
- The Levellized tariff shall remain firm and fixed and shall be binding on the Successful Bidder till completion of work for payment of Incentive amount irrespective of his actual cost of execution of the project. No escalation will be granted on any reason whatsoever. The bidder shall not be entitled to claim any additional charges, even though it may be necessary to extend the completion period for any reasons whatsoever.
- The Levellized tariff shall be inclusive of all duties and taxes, insurance etc. The prices quoted by the firm shall be complete in all respect and no price variation /adjustment shall be payable by TSREDCO.
- The Operation & Maintenance of Solar Photovoltaic Power Plant would include wear, tear, overhauling, machine breakdown, insurance, and replacement of defective modules, invertors / Power Conditioning Unit (PCU), spares, consumables & other parts for a period of 25 years.
- The Levellized tariff shall be in accordance with all terms, conditions, specifications and other conditions of the Contract as accepted by the TSREDCO and incorporated in the agreement.

## 7 FINANCIAL CLOSURE OR PROJECT FINANCING ARRANGEMENTS

(i) The Project shall achieve Financial Closure within 03 (Three) months from the Effective Date of the Power Purchase Agreement (PPA) (for e.g. if Effective Date of the PPA is 07.08.2020, then scheduled Financial Closure date shall be 07.11.2020).

(ii) At this stage, the SPD shall report 100% tie-up of Financing Arrangements for the Projects. In this regard the SPD shall submit a certificate from all financing agencies regarding the 100% tie-up of total cost indicated for the Project. Additionally, the SPD shall furnish official Permission from beneficiary Dept. to demonstrate/right to use that required roof/land/ plot for project development under possession of the SPD. In this regard the SPD shall be required to furnish the official permission documentary evidences to establish the possession of the required roof/land/lease/sub lease for project development (for 25 years) in the name of the SPD.

(a) Official permission letter to SPD from beneficiary Dept. for allotment/right to use of land as per beneficiary Dept. Terms & Conditions and possession of the roof/Land as mentioned in the LOI.

(b) All agreements and approvals, clearances from beneficiary Dept. related to the project along with all necessary supporting documents.

(iii) In case of delay in achieving above condition as may be applicable, beneficiary Dept. / TSREDCO shall encash Performance Bank Guarantees and shall remove the bidder from the list of the selected bidders, unless the delay is on account of delay in permission granted for roof/land/plot for project development from beneficiary Dept., or due to Force Majeure as per PPA. An extension maximum of One Month from scheduled Financial Closure date can however be considered, on the sole request of SPD, on advance payment of extension charges of INR 2000/- per day +18% GST. This extension will not have an impact on the Scheduled Commissioning Date of the Projects. Subsequent to the completion of deadline for achieving financial closure, TSREDCO shall issue notices to the SPDs who are not meeting the requirements of Financial Closure as per the bid deadlines. The notice shall provide a period of 7 business days to the respective SPDs to either furnish the necessary documents or make the above mentioned payment of INR 2000/ day+18% GST. In case of non-submission of either the requisite documents or the necessary amount upon expiry of the above-mentioned notice period of 7 days, beneficiary Dept. shall encash the PBG of the corresponding SPD and terminates the PPA for the corresponding Project. The amount of INR 2000/ day+18% GST shall be paid by the SPD in advance prior to the commencement of the said delay period and shall be calculated based on the period of delay as estimated by the SPD. In case of the SPD meeting the requirements of Financial Closure before the last date of such proposed delay period, the

remaining amount deposited by the SPD shall be returned by TSREDCO. Interest on account of delay in deposition of the above-mentioned charges or on any subsequent extension sought, shall be levied @ one year SBI MCLR rate/annum +18% GST on pro-rata basis. Any extension charges paid so, shall be returned to the SPD without any interest on achievement of successful commissioning within the Scheduled Commissioning Date, on pro-rata basis, based on the project capacity commissioned as on Scheduled Commissioned Date.

(iv) The SPD will have to submit the required documents to TSREDCO at least 14 days prior to the scheduled Financial Closure date. In case of delay in submission of documents mentioned above, TSREDCO shall not be liable for delay in verification of documents and subsequent delay in Financial Closure.

### **8 COMMISSIONING:**

The Commissioning of the Project shall be carried out by the SPD in line with the procedure elaborated in draft PPA document.

**8.1. PART COMMISSIONING:** There shall be no Part Commissioning allowed for the Project. Relaxation subjected to site conditions and with prior approval of beneficiary.

### **8.2 PENALTY FOR DELAY IN PROJECT IMPLEMENTATION**

If the bidder fails to commission the allocated capacity within 90 to 180days from date of issue of allocation letter, Penalty on per day basis calculated for the Performance Security on a 90 to 180days period would be levied. After above project duration period allocated capacity will get cancelled and the PBG amount pro-rata to non-commissioned capacity would be forfeited.

Example: If a project of 500 kW is delayed by 36 days then the LD will be levied as given below.

Eg. PENALTY = ((Performance Security)/180 days)\*delayed days = (15,00,000 /180)\*36

### **8.3 EARLY COMMISSIONING**

The SPD shall be permitted for full commissioning of the Project even prior to the Scheduled Commissioning Date. In case the entire capacity is commissioned prior to the Scheduled Commissioning Date, Beneficiary Dept. may purchase the generation at PPA Tariff. However, early commissioning of the Project and subsequent energy procurement from the same shall be subject to the approval of the Beneficiary Dept.

## **9. COMMERCIAL OPERATION DATE (COD)**

Commercial Operation Date (COD) shall be the date on which the commissioning certificate is issued upon successful commissioning of the full capacity of the Project. The 25-year tenure of PPA shall be as per the provisions of PPA.

(a) **Commissioning of the Project:** This will be on a date, when the project meets the criteria defined for project commissioning. TSREDCO may authorize any individual or committee or organization to declare the project commissioned on site.

## **10. STRUCTURING OF THE BID SELECTION PROCESS**

10.1 Single stage, Double Envelope bidding followed by Reverse Auction has been envisaged under this bid. Bidders have to submit both Techno-Commercial Bid and Financial Bid (Tariff) together in response to this bid online. The preparation of bid proposal has to be in the manner described in Clause, Section-II, Instructions to Bidders (ITB) of bid.

## **11. INSTRUCTIONS TO BIDDERS FOR STRUCTURING OF BID PROPOSALS IN RESPONSE TO BID**

The bidder including its Parent, Affiliate or Ultimate Parent or any Group Company shall submit single response to bid.

Detailed Instructions to be followed by the bidders for online submission of response to tender are stated at Annexures

Submission of bid proposals by Bidders in response to tender shall be in the manner described below:

- i. Covering Letter
- ii. In case of a Bidding Consortium, a Power of Attorney in favour of the Lead Member issued by the other Members of the Consortium shall be provided in original.

In the event any Member of the Bidding Consortium (other than Lead Member) is a foreign entity, it may submit Board Resolutions in place of Power of Attorney for the purpose of fulfilling the requirements under this clause. Provided that such Board Resolutions shall be supported by an unqualified opinion issued by the legal counsel of such foreign entity stating that the Board Resolutions are in compliance with the applicable laws of the respective jurisdictions of the issuing Company and the authorizations granted therein are true and valid.

- iii. Earnest Money Deposit (EMD) in the form
- iv. Board Resolutions, as per prescribed formats certified by the Company Secretary or the Director of the relevant Bidder, as applicable to the Bidder and mentioned hereunder:



- a. Board Resolution from the Bidding Company or the Lead Member of the Consortium, as the case may be, in favour of the person signing the response to tender and in the event of selection of the Projects and to sign the PPA through TSREDCO. Board Resolution from each of the Consortium Members in favour of the person signing Consortium Agreement.
- b. Board Resolution from the Bidding Company committing 100% (One Hundred Percent) of the equity requirement for the Project/ Board Resolutions from each of the Consortium Members together in aggregate committing to 100% (One Hundred Percent) of equity requirement for the Project (in case of Bidding Consortium); and
- c. Board Resolutions from each of the Consortium Members and Lead member contributing such additional amount over and above the percentage limit (specified for the Lead Member and other member in the Consortium Agreement) to the extent becoming necessary towards the total equity share in the Project Company, obligatory on the part of the Consortium pursuant to the terms and conditions in the Consortium Agreement.
- v. In case of a Consortium, the Consortium Agreement between the Members in the Consortium along with Board resolution from each Member of the Consortium for participating in Consortium.
- vi. Format for Financial Requirements along with the certificate from practicing Chartered Accountant/ Statutory Auditors showing details of computation of the financial credentials of the Bidder.
- vii. A disclosure statement regarding participation of any related companies in the bidding process.
- viii. Format for Technical Criteria (to be filled out separately) in line with Clause, Section-II, Instructions to Bidders (ITB) of tender.
- ix. Declaration by the Bidding Company/ Lead Member of Bidding Consortium for the Proposed Technology Tie Up as per Format (to be filled out separately).
- x. Details of all types of securities/instruments which are pending conversion into equity whether optionally or mandatorily.
- xi. No Deviation Certificate as per mentioned in Format
- xii. **Attachments:**
  - a. Memorandum of Association, Article of Association needs to be attached along with the bid. The bidder should also highlight the relevant provision which highlights the objects relating to Power/ Energy/ Renewable Energy/ Solar Power plant development.
    - In case, there is no mention of the above provisions in the MoA/ AoA of the bidding company, the same has to be amended and submitted prior to signing of PPA, if the bidder is selected as Successful bidder.

- If the selected bidder wishes to execute the project through a Special Purpose Vehicle (SPV), the MoA/ AoA of the SPV highlighting the relevant provision which highlights the objects relating to Power/ Energy/ Renewable Energy/ Solar Power plant development has to be submitted prior to signing of PPA.
- b. Certificate of Incorporation of Bidding Company/ all member companies of Bidding Consortium.
- c. A certificate of shareholding of the bidding company, its parent and Ultimate Parent (if any) duly certified by a practicing Chartered Accountant/ Company Secretary as on a date within 30 days prior to the last date of bid submission, along with documents containing information about the promoters, and their shareholding in the Company (as on a date within 30 days prior to the last date of bid submission) indicating the controlling shareholding at the stage of submission of response to tender to TSREDCO as per Clause, Section-II, Instructions to Bidders (ITB) of tender. TSREDCO reserves the right to seek additional information relating to shareholding in promoter companies, their parents/ ultimate parents and other group companies to satisfy themselves that tender conditions have been complied with and the bidder will ensure submission of the same within the required time lines.
- d. Certified copies of annual audited accounts for the last financial year, i.e. FY 2019-20.

## **12. IMPORTANT NOTES AND INSTRUCTIONS TO BIDDERS:**

- 12.1 Wherever information has been sought in specified formats, the Bidders shall fill in the details as per the prescribed formats and shall refrain from any deviations and referring to any other document for providing any information required in the prescribed format.
- 12.2 The Bidders shall be shortlisted based on the declarations made by them in relevant schedules of tender. The documents submitted online will be verified before signing of PPA in terms of Clause, Section-II, Instructions to Bidders, ITB of tender.
- 12.3 If the Bidder/ Member in a Bidding Consortium conceals any material information or makes a wrong statement or misrepresents facts or makes a misleading statement in its response to tender, in any manner whatsoever, TSREDCO reserves the right to reject such response to tender and/ or cancel the Letter of Award, if issued, and the Bank Guarantee provided up to that stage shall be en-cashed. Bidder shall be solely responsible for disqualification based on their declaration in the submission of response to tender bid.
- 12.4 After the Effective Date of PPA, consequences specified in PPA shall apply.

12.5 Response submitted by the Bidder shall become the property of the TSREDCO and TSREDCO shall have no obligation to return the same to the Bidder. However, the EMDs submitted by unsuccessful Bidders shall be returned as specified in Clause, Section-II, Instructions to Bidders (ITB) of bid.

12.6 All documents of the response to bid (including bid and subsequent Amendments/ Clarifications/ Addenda and PPA) submitted online must be digitally signed by the person authorized by the Board as per Format.

12.7 The response to bid shall be submitted as mentioned in Clause, Section-II, Instructions to Bidders (ITB) of bid. No change or supplemental information to a response to bid will be accepted after the scheduled date and time of submission of response to bid. However, TSREDCO reserves the right to seek additional information from the Bidders, if found necessary, during the course of evaluation of the response to bid.

12.8 The bidder shall make sure that the correct, valid and operative Pass-Phrase to decrypt the relevant Bid-part is submitted into the 'Time Locked Electronic Key Box (EKB)' after the deadline of Bid submission, and before the commencement of the Online Tender Opening Event (TOE) of Technical bid.

12.9 All the information should be submitted in English language only. In case of foreign bidders having documents in other than English language, then the documents shall be translated in English language by certified translator and submitted.

12.10 Bidders shall mention the name of the contact person and complete address and contact details of the Bidder in the covering letter.

12.11 Response to tender that is incomplete, which do not substantially meet the requirements prescribed in this tender, will be liable for rejection by TSREDCO.

12.12 Response to bid not submitted in the specified formats will be liable for rejection by TSREDCO.

12.13 Bidders delaying in submission of additional information or clarifications sought will be liable for rejection.

12.14 Non-submission and/ or submission of incomplete data/ information required under the provisions of bid shall not be construed as waiver on the part of TSREDCO of the

obligation of the Bidder to furnish the said data/ information unless the waiver is in writing.

12.15 Only the State of Telangana Courts shall have exclusive jurisdiction in all matters pertaining to this tender bid.

### **13. NON-RESPONSIVE BID**

The electronic response to bid submitted by the bidder along with the documents submitted offline to TSREDCO shall be scrutinized to establish “Responsiveness of the bid”. Each bidder’s response to bid shall be checked for compliance with the submission requirements set forth in this bid.

Any of the following conditions shall cause the Bid to be “Non-responsive”: -

- (a) Non-submission of Cost of bid and/ or Processing Fee as mentioned in the Bid Information Sheet;
- (b) Non-submission of EMD in acceptable form along with bid document.
- (c) Response to bid not received by the due date and time of bid submission;
- (d) Non-submission of correct, valid and operative Pass-Phrase to decrypt either the Technical Bid Part or Financial Bid Part offline before due date and time of submission of bid;
- (e) Non-submission of the original documents mentioned at Clause, Section- II, Instructions to Bidders (ITB) of tender bid by due date and time of bid submission;
- (f) Any indication of tariff in any part of response to the bid, other than in the financial bid;
- (g) Data filled in the Electronic Form of Financial Bid (Second Envelope), not in line with the instructions mentioned in the same electronic form;
- (h) In case it is found that the Bidding Company including Ultimate Parent Company/ Parent Company/ Affiliate/ Group Companies have submitted more than one response to this Tender bid, then all these bids submitted shall be treated as non-responsive and rejected.

### **14. METHOD OF SUBMISSION OF RESPONSE TO TENDER BY THE BIDDER**

#### **A. DOCUMENTS TO BE SUBMITTED OFFLINE (IN ORIGINAL):**

The bidder has to submit the documents in original as part of Response to Tender bid to the address mentioned in Bid Information Sheet before the due date and time of bid submission.

Bidding Envelope: Super scribed as “Bidding Envelope containing i) Covering Envelope, ii) Pass Phrase Envelope -1 & iii) Pass Phrase Envelope -2” at the top of the Envelope and “Name & Address of the Bidder” on the left hand side bottom must contain the following

- I. Covering Envelope: Super scribed as “Covering Envelope Containing Cost of Tender bid Document, Processing Fee, Bank Guarantee towards EMD, Covering Letter, and Power

of Attorney (if applicable), Consortium Agreement (if applicable), Board Resolution” must contain the following

- DD/ Pay order towards Cost of Tender bid Document as mentioned in Bid Information Sheet.
  - Processing Fee in the form DD/ Pay Order as mentioned in the Bid Information Sheet.
  - Bank Guarantee towards EMD as mentioned in the Bid Information Sheet (as per Format). One EMD may be submitted for the cumulative capacity quoted by the Bidder.
  - Covering Letter as per Format
  - Power of Attorney as per Format (if applicable),
  - Board Resolution as per Format
  - Consortium Agreement as per Format (if applicable)
  - GSTN along with respective registered address of the Bidder on the letterhead of the Bidder (signed by the Authorized signatory)
- II. Pass-Phrase Envelope-1: Containing Pass Phrase for Technical Bid duly signed by the authorized signatory in sealed envelope.
- III. Pass-Phrase Envelope-2: Containing Pass Phrase for Financial Bid duly signed by the authorized signatory in sealed envelope.

The bidding envelope shall contain the following sticker

<b>Response to Tender for Selection of Solar Power Developers for Design, Supply, Installation, Testing and commissioning of 1200KWp Grid Connected Ground Mounted power plants at 8 locations of each 150KWp at Vijaya Dairy plants of TSDDCFL, Telangana under RESCO mode</b>	
<i>Cumulative Capacity of the projects applied for</i>	_____kWp
<i>Tender Reference No.</i>	TSREDCO/SE/SPV/Govt./VIJAYA DAIRY-1200kWp/RESCO/2020 date. <u>09</u> .11.2020
<i>Submitted by</i>	<i>(Enter Full name and address of the Bidder)</i>
<i>Authorized Signatory</i>	<i>(Signature of the Authorized Signatory) (Name of the Authorized Signatory) (Stamp of the Bidder)</i>
<i>Bid Submitted to</i>	<b>VC &amp; Managing Director</b> TELANGANA STATE RENEWABLE ENERGY DEVELOPMENT CORPORATION LTD (TSREDCO) Corporate Office: D. No. 6-2-910, Visvesvaraya Bhavan, The Institution of Engineers Building, Khairatabad, Hyderabad - 500 004. Telangana State, India PHONE: 040-23201502 / 03, FAX : 040-23201504 E-mail : <a href="mailto:info@tsredco.telangana.gov.in">info@tsredco.telangana.gov.in</a> , <a href="mailto:se@tsredco.telangana.gov.in">se@tsredco.telangana.gov.in</a>

**14.b DOCUMENTS TO BE SUBMITTED ONLINE**

Detail instructions to be followed by the bidders for online submission of response to Tender bid. The bidders shall strictly follow the instructions mentioned in the electronic form in respective technical bid and financial bid while filling the form


**If the Bidder has submitted offline documents and fails to submit the online bid, then the same shall be treated as incomplete bid and Cost of Tender bid, processing fee submitted shall be en-cashed and the EMD(s) shall be returned. The bid shall not be processed further in such case.**

All documents of the response to Tender bid submitted online must be digitally signed on [www.tender.telangana.gov.in](http://www.tender.telangana.gov.in) which should contain the following:

**15. NOTICE BOARD FOR DISPLAY**

The selected SPD will have to put a notice board (at least 180cm x 120cm) at its project site main entrance prominently displaying the following message before declaration of COD.

.....kW Grid Connected Solar PV Project Owned and operated by  
----- (insert name of the SPD/Supplier)  
Setting up of \_\_\_\_kW Solar PV Project at .....,  
.....  
Implemented by



**TELANGANA STATE RENEWABLE ENERGY DEVELOPMENT CORPORATION LTD**

**16. VALIDITY OF THE RESPONSE TO TENDER BID**

The Bidder shall submit the response to Tender bid which shall remain valid up to 90 (Ninty) days from the last date of submission of response to Tender bid (“Bid Validity”). TSREDCO reserves the right to reject any response to Tender bid which does not meet the aforementioned validity requirement.

## 17 BID PREPARATION COST

The Bidder shall be responsible for all the costs associated with the preparation of the response to Tender bid and participation in discussions and attending pre-bid meeting(s) etc. TSREDCO shall not be responsible in any way for such costs, regardless of the conduct or outcome of the bid process.

## 18 CLARIFICATIONS/ ENQUIRIES/ AMENDMENTS

18.1 Clarifications/ Doubts, if any, on Tender bid document may be emailed and/ or through [www.tender.telangana.gov.in](http://www.tender.telangana.gov.in) portal.

18.2 If necessary, amendments, clarifications, elaborations shall be issued by TSREDCO which will be notified on TSREDCO/ [www.tender.telangana.gov.in](http://www.tender.telangana.gov.in) web site. No separate reply/ intimation will be given for the above, elsewhere.

### 18.3 Enquiries/ Clarifications may be sought by the Bidder from

Sl.No	Designation	Contact Numbers	Email id
1.	General Manager	040 - 23201502/03	<a href="mailto:info@tsredco.telangana.gov.in">info@tsredco.telangana.gov.in</a>
2.	Project Director	040 - 23201502/03	<a href="mailto:se@tsredco.telangana.gov.in">se@tsredco.telangana.gov.in</a>

## 19 RIGHT OF TSREDCO TO REJECT A BID:

TSREDCO reserves the right to reject any or all of the responses to Tender bid or cancel the Tender bid or annul the bidding process for any project at any stage without assigning any reasons whatsoever and without thereby any liability. In the event of the tender being cancelled at any stage, the processing fee (excluding GST, if amount credited to TSREDCO's account), without any interests, and EMD submitted by the Bidders shall be returned to the respective Bidders.

## 20 POST AWARD COMPLIANCES

Timely completion of all the milestones i.e. signing of PPA, meeting Financial Closure Requirements/ Conditions Subsequent (PPA), Commissioning etc. will be the sole responsibility of SPD. TSREDCO/Beneficiary Dept. shall not be liable for issuing any intimations/ reminders to SPDs for timely completion of milestones and/ or submission of compliance documents.

Any checklist shared with SPD by TSREDCO for compliance of above mentioned milestones to be considered for the purpose of facilitation only. Any additional documents required as per the conditions of Tender bid and PPA must be timely submitted by the SPD.



**SECTION - III**

# **TENDER SCHEDULE**



SECTION - III  
TENDER SCHEDULE

**1. PREAMBLE:**

The scope of work for the bidder include complete design, shadow analysis of Ground, engineering, manufacture, supply, storage, civil work, erection, testing & commissioning of **1200KWp Grid Connected Ground Mounted power plants at 8 locations of each 150KWp at Vijaya Dairy plants of TSDDCFL, Telangana under RESCO Mode** including operation and maintenance (O&M) of the project and cleaning of modules at regular intervals for a period of (25) Twenty Five years after commissioning through e-procurement platform (i.e. [www.tender.telangana.gov.in](http://www.tender.telangana.gov.in)).

The Govt. of Telangana has announced Telangana Solar Power Policy 2015 with provisions for promotion of Grid connected Solar Rooftop systems with net metering/gross metering option to the consumers. The following are the provisions for promotion of grid connected solar rooftop TS. Solar Power Policy 2015,

- The Government will promote solar rooftop systems on public buildings, domestic, commercial and industrial establishments.
- The consumers are free to choose either net or gross meter option for sale of power to DISCOM and the applicable tariff for either of the cases shall be equal to average Cost to Service of the DISCOM which will be determined by VIJAYA DAIRY every year.
- Permission will be given to the group of persons / society to set up solar power projects and will be treated as collective generation for supply of power to the households of each society / group member.
- Time bound clearance of proposals through online mode.
- The DISCOMs have issued the implementation guidelines based on the promotion policy announced by the GoTS.

On behalf of consumers under this scheme therein, TSREDCO inviting Bids for empanelment for Supply, Installation, Commissioning, maintenance and Operation of Solar Rooftop Power plants for 25 years in Telangana State, under Net Metering Policy to take up the projects under RESCO MODE.

**2. INCOME TAX:**

During the course of the contract period, deduction of income tax and surcharge as in force at source shall be made at the prevailing rate of income tax department issued from time to time of the gross amount of each bill.

**3. RATES , TAXES AND DUTIES:**

All the rates in the tender shall be **inclusive of all statutory compliances** like PF, ESI, Service Tax, GST, etc. However, any changes made to the tax structure by the government shall be duly considered and appropriate changes made.

**4. PLACE OF WORK AND VISIT TO SITE:**

Intending tenders shall visit the Site/ Campus to acquaint with local site conditions, nature and requirement of work, present conditions of premises/fittings/fixtures, etc., before start of the work.

**5. BID DETAILS:**

The bid shall be on RESCO MODE for design, supply, installation and commissioning of grid connected solar rooftop systems and the levelised tariff quoted by the bidders for 25 years.

**6. ELIGIBILITY CRITERIA:**

- a. Valid Registered SPV Suppliers/ Manufacturers/ System Integrators with TSREDCO.
- b. Bidder should have experience at least minimum **200KWp** capacity at single site under Net metering in field of Grid Connected Solar PV systems in any one (1) FY from the last 3 Years (i.e. FY 2017-18, 2018-19 and 2019-20). Experience certificate along with performance from beneficiary, should be before 6months from last date

**6.1. TECHNICAL ELIGIBILITY CRITERIA:**

- a. Under this Tender bid, it is proposed to promote only commercially established and operational technologies to minimize the technology risk and to achieve timely commissioning of the Projects. The Bidder may indicate regarding the selection of technology and its details at the time of submission of bids in the prescribed Format. However, the Successful Bidder has to confirm the selection of technology in line with the above at the time of Financial Closure. The technology proposed at the time of submission of response to Tender bid can be changed at the time of Financial Closure.
- b. Detailed technical parameters for Solar PV Projects to be met by SPDs are at Annexure. The Bidders shall strictly comply with the technical parameters detailed in the Annexure. Further, the cells and modules used in the Project shall be sourced only from the models and manufacturers included in the “Approved List of Models and Manufacturers” as published by MNRE and updated as on the date of commissioning of the Project.
- c. The Projects shall also comply with the criteria for power generation detailed in Clause in Section-II, Instructions to Bidders (ITB) of Tender bid.

**6.2 FINANCIAL ELIGIBILITY CRITERIA:**

- a. Bidder should have annual turnover of Rs.5.00 Cr. In any one (1) Financial Year during the last three financial years i.e. 2017-18 , 2018-19 and 2109-20 (Certificate from CA is to be furnished).

**7. FORCE MAJEURE**

a. Notwithstanding the provisions of clauses contained in this BID document; the contractor shall not be liable to forfeit

(a) Security deposit for delay and

(b) Termination of contract; if he is unable to fulfill his obligation under this contract due to force majeure conditions.

b. 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 fright embargoes etc. Whether a "Force majeure" situation exists or not, shall be decided by TSREDCO and its decision shall be final and binding on the contractor and all other concerned.

c. 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, TSREDCO has the right to terminate the contract in which case, the security deposit shall be refunded to him.

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

**8. COMMISSIONING /COMPLETION CERTIFICATE**

a. Application for completion/commissioning certificate:

When the Successful bidder fulfills his obligation under the Contract, he shall be eligible to apply for Completion Certificate. The Engineer-in-Charge of TSREDCO and beneficiary department officials shall normally issue to the Successful bidder the Completion Certificate within 15days after receiving any application therefore from the Successful bidder after verifying from the completion documents and satisfying himself that the Work has been completed in accordance with and as set out in Contract.

- b. **DOCUMENT SUBMISSION FOR ISSUE COMMISSIONING/COMPLETION CERTIFICATE:**  
For the purpose of above the following documents will be deemed to form the completion documents:
- c. Checklist for inspection of Roof top SPV power plants as per TSREDCO format.
  - d. Project completion report from successful bidder as per MNRE format
  - e. Project completion/satisfaction certificate from concern beneficiary dept. officials.

TSREDCO



## SECTION - IV

# BID EVALUATION AND SELECTION OF PROJECTS

## SECTION - IV

### BID EVALUATION AND SELECTION OF PROJECTS

#### 1 BID EVALUATION

Bid evaluation will be carried out considering the information furnished by Bidders as per provisions specified in Section-II, Instructions to Bidders (ITB) of this Tender bid. The detailed evaluation procedure and selection of bidders are described in subsequent clauses in this Section.

#### 2 TECHNO-COMMERCIAL EVALUATION OF BIDDERS

##### 2.a FIRST ENVELOPE (TECHNICAL BID) EVALUATION (STEP - 1)

2.a.1 The first envelope (Technical Bid submitted online) of only those bidders will be opened by TSREDCO whose required documents as mentioned at Clause, Section-II, Instructions to Bidders (ITB) of this Tender bid are received at the office of TSREDCO on or before the due date and time of bid submission.

2.a.2 Documents (as mentioned in the previous clause) received after the bid submission deadline specified in the Bid Information Sheet shall be rejected and returned unopened, if super-scribed properly with address, to the bidder.

2.a.3 Subject to Clause, Section-II, Instructions to Bidders (ITB) of this Tender bid, TSREDCO will examine all the documents submitted by the Bidders and ascertain meeting of eligibility conditions prescribed in the Tender bid. During the examination of the bids, TSREDCO may seek clarifications/ additional documents to the documents submitted etc. from the Bidders if required to satisfy themselves for meeting the eligibility conditions by the Bidders. Bidders shall be required to respond to any clarifications/ additional documents sought by TSREDCO within 07 (seven) days from the date of such intimation from TSREDCO. All correspondence in this regard shall be made through email/ e-tender portal only. It shall be the responsibility of the Bidder to ensure that the email id of the authorized signatory of the Bidder is functional. The Bidder may provide an additional email id of the authorized signatory in the covering letter. No reminders in this case shall be sent. It shall be the sole responsibility of the Bidders to remove all the discrepancies and furnish additional documents as requested. TSREDCO shall not be responsible for rejection of any bid on account of the above.

2.a.4 The response to Tender bid submitted by the Bidder shall be scrutinized to establish Techno- Commercial eligibility as per Tender bid.

**2.b SECOND ENVELOPE (FINANCIAL BID) EVALUATION (STEP - 2)**

In this step evaluations of Techno-Commercially Qualified Bids for the projects shall be done based on the “First Round Tariff Bid” quoted separately for the projects by the bidders in the Electronic Form of Financial Bid. After this step, the shortlisted bidders shall be invited for the Reverse Auction separately for the projects.

2.b.1 Second Envelope (containing First Round Tariff) of only those bidders shall be opened for the projects whose technical bids are found to be qualified.

2.b.2 The Bidder including its Parent, Affiliate or Ultimate Parent or any Group Company will have to submit a single bid (single application) per project and quoting a single tariff per kWh per project applied for. The tariff has to be quoted up to two places of decimal only. If it is quoted with more than two digits after decimal, it shall be ignored after first two decimal places. (For e.g. if the quoted tariff is INR 4.337, then it shall be considered as INR 4.33).

2. b.3 In this step, evaluation will be carried out based on tariff quoted by Bidders.

2.b.4 On completion of Techno-Commercial bid evaluation, if it is found that only one or two Bidder(s) is/are eligible per project for the next stage, opening of the financial bid of the bidder will be at the discretion of TSREDCO. Thereafter, TSREDCO will take appropriate action as deemed fit.

2.b.5 If the first-round tariff quoted is same for two or more Bidders for a particular project, then all the Bidders with same tariff shall be considered of equal rank/ standing in the order.

2.b.6 All Bidders with same tariff shall be eligible for reverse auction round (provided their rank is equal to or less than nth Bidder as mentioned in Clause of this Section).

2.b.7 Ranking of bidders after Financial Bid Evaluation: Following illustrates an example of ranking of bidders after financial bid opening and evaluation

<b>Bidder</b>	<b>Submitted Financial Bid</b>	<b>Ranking</b>
B1	₹ 4.10 (Tariff in ₹/ kWh)	L1
B2	₹ 4.20 (Tariff in ₹/ kWh)	L2
B3	₹ 4.30 (Tariff in ₹/ kWh)	L3
B4	₹ 4.30 (Tariff in ₹/ kWh)	L3
B5	₹ 4.43 (Tariff in ₹/ kWh)	L4
B6	₹ 4.60 (Tariff in ₹/ kWh)	L5
B7	₹ 4.70 (Tariff in ₹/ kWh)	L6

### **3.NEGOTIATIONS (STEP - 3)**

3.1 The negotiations for tender shall be conducted separately on the day as intimated by TSREDCO to the eligible bidders.

3.2 The Total eligible bidders for the Project for negotiations shall be decided as mentioned below:

i) After financial bid evaluation of the tender, the bidders shall be shortlisted in the ascending order of financial bids quoted.

3.3 At least one week prior to negotiations, advance intimation regarding the date and time of the negotiations will be sent by e-mail to all the bidders whose technical bids have been opened and found to be qualified for the tender. However, from this advance intimation it shall not be construed by the bidders that they have been shortlisted for negotiations.

3.4 The minimum decrement value for tariff shall be INR 0.01 per kWh. The Bidder can mention its revised discounted tariff which has to be at least 01 (One) Paise less than its current tariff.

3.4.1 Bidders can only quote any value lower than their previous quoted tariff taking into consideration the minimum decrement value mentioned in the previous clause. However, at any stage, increase in tariff will not be permissible. Bidders can improve their ranking by quoting the tariff lower than their last quoted tariff.

### **4. SELECTION OF SUCCESSFUL BIDDERS:**

4.1 The bidders shall be selected in the ascending order with lowest quoted tariff (being L1) project wise. In case of a tie among two or more bidders (i.e. their last quoted tariff being the same at the end), they will be considered in the chronological order of their last bid with preference to that bidder who has quoted his last bid earlier than others.

In the above case, if the time of quote also becomes exactly same among the bidders at a tie, then the ranking among these bidders shall be done as follows:

Lowest rank will be given to the bidder who has quoted the lowest in Financial Bid and so on.





## SECTION - V

# TECHNICAL SPECIFICATIONS

Section - V

Technical specifications

The proposed projects shall be commissioned as per the technical specifications given below. Competent Authority's decision will be final and binding on the bidder.

**DEFINITION:**

A Grid Tied Solar Rooftop Photo Voltaic (SPV) power plant consists of SPV array, Module Mounting Structure, Power Conditioning Unit (PCU) consisting of Maximum Power Point Tracker (MPPT), Inverter, and Controls & Protections, interconnect cables, Junction boxes, Distribution boxes and switches. PV Array is mounted on a suitable structure. Grid tied 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, 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 and accessories

**1. SOLAR PV MODULES**

**SPV CRYSTALLINE MODULES**

1.1. Only indigenously manufactured PV modules with RFID and the manufacturer should provide the following minimum information laminated inside the module:

- Made in India (to be subscribed in words)
- Company name / logo
- Module number (it should indicate the voltage and rated wattage of the module)
- Serial number
- Year of make

1.2 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 IEC 61215/IS14286. In addition, the modules must conform to IEC 61730 Part-2- 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/IS 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 250Wp and above wattage. Module capacity less than minimum 250 watts should not be accepted.
  - c) Protective devices against surges at the PV module shall be provided. Low voltage drop bypass diodes shall be provided.
  - d) PV modules must be tested and approved by one of the IEC authorized test centers.
  - e) The module frame shall be made of corrosion resistant materials, preferably having anodized aluminum.
  - f) The bidder shall carefully design & accommodate requisite numbers of the modules to achieve the rated power in his bid. TSREDCO/owners shall allow only minor changes at the time of execution.
  - g) Other general requirement for the PV modules and subsystems shall be the Following:
    - i. The rated output power of any supplied module shall have tolerance of +/- 3%.
    - ii. 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.
    - iii. 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.
    - iv. IV curves at STC should be provided by bidder.
- 1.3. Modules deployed RF identification tag. The following information to be mentioned in the RFID used on each modules. (This has to be inside the laminate, but must be able to withstand harsh environmental conditions).
- a. Name of the manufacturer of the PV module
  - b. Name of the manufacturer of Solar Cells.
  - c. Month & year of the manufacture (separate for solar cells and modules)
  - d. Country of origin (separately for solar cells and module)
  - e. I-V curve for the module Wattage,  $I_m$ ,  $V_m$  and FF for the module
  - f. Unique Serial No and Model No of the module
  - g. Date and year of obtaining IEC PV module qualification certificate.
  - h. Name of the test lab issuing IEC certificate.
  - i. Other relevant information on traceability of solar cells and module as per ISO 9001 and ISO 14001.

**WARRANTIES:**

**a) Material Warranty:**

i. 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")

ii. Defects and/or failures due to manufacturing

iii. Defects and/or failures due to quality of materials

iv. 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

**b) 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% after ten years period of the full rated original output.

**2. MODULE MOUNTING STRUCTURE:**

a. The module alignment and tilt angle shall be calculated to provide the maximum annual energy output. This shall be decided based on the location of array installation.

b. The structure shall be designed to allow easy replacement of any module and shall be in line with site requirement.

c. The structures shall be fixed to the foundation in such a manner that, in future is required they can be easily relocated to a different foundation.

d. The mounting structure shall be designed for simple mechanical and electrical installation. It shall support SPV modules at a given orientation, absorb and transfer the mechanical Loads to the base properly.

e. The mounting steel structure shall be as per latest BIS 2062 (amended up to date) and galvanization of mounting structure shall be in compliance of BIS 4759 (amended up to date).

f. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from SPV panels at the same time.

g. The bidder shall be designed Module Mounting Structure as per MNRE norms for normal / plain VIJAYA DAIRYC roofs.

h. The bidder shall be designed Module Mounting Structure with towards south direction and it is to be with stand 150KMPH wind speed and also maintain the alignment and tilt angle as per MNRE norms. The structure designs are to be approved by Govt. approved / empanelled structural Engineer for specific/ required locations.

- i. Nut & bolts, supporting structures including Module Mounting Structures shall have to be adequately protected from atmosphere and weather prevailing in the area.
- j. All fasteners shall be of stainless steel of grade SS 304.
- k. The Mounting structure shall be grounded properly using GI strips and maintenance free earthing kit.
- l. 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 (wind speed of 150 km/hour). 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 TSREDCO. Suitable fastening arrangement such as grouting and calming should be provided to secure the installation against the specific wind speed.
- m. IS 800-2007 shall be followed for structural design.
- n. SPV module mounting structure shall be fixed type with provision of manual correction in tilt angle which shall be made after every 3 months to get maximum output. Azimuth shall be 0 degree True south
- o. Hot dipped Galvanized Steel Structural with minimum 80 microns of galvanization must be considered for all type of structural steel proposed for the power plant
- p. Design drawings with material selected shall be submitted for prior approval of the employer.
- q. The Bidder/Bidding Consortium/Bidding Consortium shall specify installation details of the PV modules and the support structures with appropriate diagram and drawings.

### **3. STRING COMBINER BOX OR ARRAY JUNCTION BOXES**

- a. The junction Boxes shall have suitable arrangement for the followings:-
  - Combine groups of modules into independent charging sub-arrays that will be wired into the controller.
  - Provide arrangement for disconnection for each of the groups.
  - Provide a test point for each sub-group for quick fault location
  - To provide group array isolation
- b. The string combiner box/ junction box shall be dust proof, vermin proof, and waterproof and made of Polycarbonate Plastic
- c. The terminal will be connected to copper bus-bar arrangement of proper size to be provided. The junction boxes shall have suitable cable entry points fitted with cable glands of appropriate sizes for both incoming and outgoing cables
- d. Suitable markings shall be provided on the bus-bars for easy identification and cable ferrules will be fitted at the cable termination points for identification.

- e. The string combiner box/ junction box shall be with protection class IP 65 for mounting outside in Open weather condition.
- f. Each string combiner box/ junction box will have suitable Reverse Blocking Diodes of maximum DC blocking voltage of 600V / 1000V, whichever causes less power loss, with suitable arrangement for its connecting
- g. The string combiner box/ Array junction Box will also have suitable surge protection device.
- h. The current carrying ratings of the string combiner box/ junction box shall be suitable with adequate safety factor, to inter connect the Solar PV system corresponding to the project capacity, as designed by the Bidder/Bidding Consortium
- i. Necessary sensors and transducers shall be provided in the string combiner boxes to facilitate monitoring of all string parameters in the data acquisition system.
- j. String level remote monitoring facility shall be incorporated to monitor generation and faults at string level.

#### **4. INVERTERS / POWER CONDITIONING UNIT (PCU)**

- a. The PCU / Grid Tied Inverter shall carry a warranty of minimum 5years.
- b. Inverter/PCU shall be non-transformer string inverters, grid tied in nature, shall consist of MPPT controller. Inverters shall be decided based on array design/suitable rating in case of string design, associated control and protection devices etc all integrated into PCU. It shall provide necessary protections for Grid Synchronization. The Inverters should convert DC power produced by SPV modules in to AC power and must synchronize automatically its AC output to the exact AC Voltage and frequency of Grid.
- c. The DC energy produced has to be utilized to maximum and supplied to the bus for inverting to AC voltage to extract maximum energy from solar array and provides 3-ph, 400V AC/ (+10% to - 10%), 50+/- 1.5 Hz with total harmonic voltage distortion less than 3% to synchronize with local grid.
- d. The Inverters shall be of very high quality having efficiency not less than 97% and shall be capable of running in integrated mode.
- e. Degree of protection of the indoor Inverters shall be at least IP-42 and that of outdoor at least IP-65.
- f. Built in with data logging to remotely monitor plant performance through external PC shall be provided (PC shall be provided along with SPV Plant).
- g. The Inverters should be designed to be completely compatible with the SPV array voltage and Grid supply voltage.
- h. The dimension, weight, foundation details etc. of the PCU shall be clearly indicated in the detailed technical specification.

- i. The PCU shall be capable of complete automatic operation, including wake-up, synchronization & shut down independently & automatically.
- j. Both AC & DC lines shall have suitable fuses & surge arrestors and Bidder/Bidding Consortium/Bidding Consortium/ss to allow safe start up and shut down of the system. Fuses used in the DC circuit should be DC rated.
- k. Inverters/PCU shall operate in sleeping mode when there will no power connected.
- l. **Protections:**
- Over voltage both at input & output
  - Over current both at input & output
  - Over/under grid frequency
  - Heat sink over temperature
  - Short circuit
  - Protection against lightning
  - Surge arrestors to protect against Surge voltage induced at output due to external source
  - Anti- Islanding Protection
  - And other required protections
- It should have user friendly LED/LCD or touch display for programming and view on line parameters such as:
- Inverter per phase Voltage, current, kW, kVA and frequency,
  - Grid Voltage and frequency,
  - Inverter (Grid) on Line status,
  - PV panel voltage,
  - Solar charge current
  - Individual power stage heat sink and cabinet temperature,
  - Inverter Import export kWh summation
  - Solar kWh summation
  - Inverter on
  - Grid on
  - Inverter under voltage/over voltage
  - Inverter over Load
  - Inverter over temperature
- m. PCU shall be capable to synchronize independently & automatically with grid power line frequency to attain synchronization and export power generated by solar plant to grid.

n. The PCU shall be capable of operating in parallel with the grid utility service and shall be capable of interrupting line fault currents and line to ground fault currents.

o. The PCU shall be able to withstand an unbalanced Load conforming to IEC standard (+/-5% voltage) and relevant Indian electricity condition. The PCU shall include appropriate self- protective and self-diagnostic features to protect itself and the PV array from damage in the event of PCU component failure or from parameters - beyond the PCU's safe operating range due to internal or external causes. The self-protective features shall not allow signals from the PCU front panel to cause the PCU to be operated in a manner which may be unsafe or damaging. Faults due to malfunctioning within the PCU, including commutation feature, shall be cleared by the PCU protective devices and not by the existing site utility grid service circuit breaker.

p. The Inverter shall go to shutdown/standby mode, with its contacts open, under the following conditions before attempting an automatic restart after an appropriate time delay.

- When the power available from the PV array is insufficient to supply the losses of the PCU, the PCU shall go to standby/shutdown mode.
- The PCU control shall prevent excessive cycling of shut down during insufficient solar radiance.

q. Operation outside the limits of power quality as described in the technical data sheet should cause the power conditioner to disconnect the grid. Additional parameters requiring automatic disconnection are

- Over current
- Earth fault
- And reverse power
- In each of the above cases, tripping time should be less than a few seconds.

r. Detailed technical description of the complete unit of offered Inverter should be furnished with bid document Following Technical documents of Inverter shall be supplied for approval after placement of order

- Detailed technical description of the complete unit
- Instructions for installation and operation
- Electrical diagrams of all internal cabling necessary for installation, maintenance and fault finding.
- Description of electrical and mechanical characteristics of units
- Maintenance and fault finding procedures.



- Safety precautions
  - Software for data monitoring with detailed description.
  - Details of data acquisition
  - Factory test reports in details on various parameters.
  - Trouble shooting procedures
  - All maintenance requirements and their schedules, including detailed instructions on how to perform each task.
  - Detailed schematics of all power instrumentation and control equipment and subsystems along with their interconnection diagrams. Schematics shall indicate wiring diagrams, their numbers and quantities, type and ratings of all components and subsystems.
  - A detailed bill of materials which shall list components model numbers, quantities and manufacturer of each supplied item.
  - All documents and write ups shall be in English. They shall be clean and legible, and must be checked, signed, approved and dated by a competent representative of the Bidder/Bidding Consortium.
- s. The Bidder/Bidding Consortium/Bidding Consortium should note that Inverters/PCU is going to be installed in an area which is prone to hot air of 48 to 50 degree centigrade. Thus the room shelters and air blower/ fan (auto operated as per requirement), if required, for Inverter will be in scope of supply. Integrated solutions into prefabricated structures or in standard metallic container may be accepted. The Bidder/Bidding Consortium/Bidding Consortium shall provide data sheet for Inverter/ Power Conditioning Unit along with their offer.
- t. The PCU/ inverters should be tested from the MNRE approved test centers / NABL /BIS /IEC accredited testing- calibration laboratories. In case of imported power conditioning units, these should be approved by international test houses.
- u. MNRE latest additional guidelines for Inverters:
1. The inverters should be tested as per IEC standards. The following criteria should be followed:
    - i. The benchmarking efficiency criteria for Grid Tied (string inverters) inverter
      - At nominal voltage and full Load is  $\geq 95\%$ .
      - For Load  $\geq 25\%$  is  $\geq 92\%$ .
    - ii. In case of standalone / grid interactive inverter the benchmarking efficiency criteria
      - At full Load is 85%
      - For the Load  $\geq 25\%$  is 80%

- iii. No Load losses should not be more than 5%.
2. The following tests are to be conducted on the inverters:
- Efficiency measurement as per IS/IEC 61683 (for system with no MPPT)
  - Overall efficiency for Grid Tied inverter as per EN50530
  - Islanding Prevention test as per IS 16169/IEC 62116
  - PV system characteristics of utility interface as per IEC 61727 (the system should meet all the clauses as per the standard except the clause 5.2.2 of IEC 61727. In case of clause 5.2.2 it should withstand the over /under frequency in the range of 47 to 52Hz)
  - Overall charge controller efficiency should be  $\geq 85\%$  at  $\geq 10\%$  Load and  $\geq 92\%$  at full Load.
  - System should have IP 65 certification for outdoor use IP 21 & 22 for indoor use.
  - Environmental testing as per IEC 60068-2-(1,2,14&30)

3. All the test laboratories should provide a clear cut verdict in the end of the test report regarding conformity / non conformity of the system against the standard / specifications for which it has been tested. Any discrepancy in the specifications of sample submitted, the test labs should specify the same in the report.

4. From 1st July' 2017 all test laboratories should start the data logging of all the test parameters during testing and soft copy of the same will be maintained for a period of 5years.

## 5. ENERGY METERING

Digital Communicable Energy Meters shall be provided for measuring power consumption by grid side Loads on continuous basis and register the cumulative energy on 30-minute interval basis (Programmable/adjustable), daily, monthly and annually the energy generated. The Energy Meter shall have default display of Cumulative kWh. The following parameters to be displayed on-demand:

- The Energy Meter shall have 4-quadrant measurement method and shall be suitable for 3-wire as well as 4-wire connection.
- The meter shall also record Maximum Demand at set interval. TOD (Time of Day) measurement shall also be possible.
- The energy meter shall communicate with the Data Acquisition System / other plant network over MODBUS protocol.
- Separate Meters shall be provided for Solar Power Generation and Auxiliary Load consumption.

- e. In case more than one inverter circuits are used for synchronizing with the grid then similar meters shall be provided for each inverter output circuit.
- f. Additionally one digital summator shall also be provided for calculation and display of total concurrent energy/ demand of all the feeders.
- g. Meters shall comply with the requirements of CEA Regulations on Installation & Operation of Meters.
- h. The functional Specification of the energy meters shall be as follows:
- Applicable IS : IS 13779 or IS 14679 depending upon accuracy of meters.
  - Accuracy Class Index: 0.2S
  - Power factor range: Zero lag-unity-zero lead
  - Display parameters : LCD test, KWH import, KWH export, MD in KW export, MD in KW import, Date & Time, AC(phase wise and line wise) current and voltages and power factor and frequency (Cumulative KWH will be indicated continuously by default & other parameters through push-button) .
  - Power Consumption: Less than 4VA in Voltage circuit and 2 VA for Current circuit. -
  - Frequency: 50 Hz with + / -5% variation
  - Test Output Device: Flashing LED visible from the front
  - Billing data: Meter serial number, Date and time, KWH import, KWH export, MD in KW (both export and import), History of KWH import and export, & MD (both export & import).
  - All these data shall be accessible for reading, recording and spot billing by downloading through optical port/RS485 on MRI or Laptop computers at site.

## **6. 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 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.

## **7. DATA ACQUISITION AND LOGGING**

- 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 / Solar cell based irradiation sensor (along with calibration certificate) provided, with the sensor mounted in the plane of the array. Readout integrated with data logging system.
- iv. Temperature: Temperature probes for recording the Solar panel temperature and/or ambient temperature to be provided complete with readouts integrated with the data logging system
- 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.
- 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 0.5 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. Computerized AC energy monitoring shall be in addition to the digital AC energy meter.

- xi. 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.
- xii. All instantaneous data shall be shown on the computer screen.
- xiii. Software shall be provided for USB download and analysis of DC and AC parametric data for individual plant.
- xiv. Provision for Internet monitoring and download of data shall be also incorporated.
- xv. Remote Server and Software for centralized Internet monitoring system shall be also provided for download and analysis of cumulative data of all the plants and the data of the solar radiation and temperature monitoring system.
- xvi. Ambient / Solar PV module back surface temperature shall be also monitored on continuous basis.
- xvii. 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.
- xviii. Remote Monitoring and data acquisition from ranging of 1kWp through Remote Monitoring System software at the Beneficiary department/TSREDCO location with latest software/hardware configuration and service connectivity for online / real time data monitoring/control complete to be supplied and operation and maintenance/control to be ensured by the supplier. Provision for interfacing these data on TSREDCO server and portal in future shall be kept.

**8. POWER & CONTROL 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: -10oC to +80oC.
- iii. Voltage rating 660/1100V
- iv. Excellent resistance to heat, cold, water, oil, abrasion, UV radiation
- v. Flexible
- vi. Sizes of cables between array inter connections, 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. The cables (as per IS) should be insulated with a special grade PVC compound formulated for outdoor use.
- vii. 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.
- viii. The Cable should be so selected that it should be compatible up to the life of the solar PV panels i.e. 25years.

- ix. The ratings given are approximate. Bidder to indicate size and length as per system design requirement. All the cables required for the plant provided by the bidder. Any change in cabling sizes if desired by the bidder/approved after citing appropriate reasons. All cable schedules/layout drawings approved prior to installation.
- x. 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.
- xi. The size of each type of DC cable selected shall be based on minimum voltage drop however; the maximum drop shall be limited to 1%.
- xii. The size of each type of AC cable selected shall be based on minimum voltage drop however; the maximum drop shall be limited to 2 %.

**9. DC DISTRIBUTION BOARD:**

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

**10. AC DISTRIBUTION PANEL BOARD:**

- a) AC Distribution Panel Board (DPB) shall control the AC power from PCU/ inverter, and should have necessary surge arrestors. Interconnection from ACDB to mains at LT Bus bar while in grid tied mode.
- b) All switches and the circuit breakers, connectors should conform to IEC 60947, part I, II and III/ IS60947 part I, II and III.
- c) The changeover switches, cabling work should be undertaken by the bidder as part of the project.
- d) 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, 50 Hz
- e) The panels shall be designed for minimum expected ambient temperature of 45 degree Celsius, 80 percent humidity and dusty weather.
- f) All indoor panels will have protection of IP54 or better. All outdoor panels will have protection of IP65 or better.
- g) Should conform to Indian Electricity Act and rules (till last amendment).

h) All the 415 AC or 230 volts devices / equipment like bus support insulators, circuit breakers, SPDs, VTs etc., mounted inside the switchgear shall be suitable for continuous operation and satisfactory performance under the following supply conditions

Variation in supply voltage	---	+/- 10 %
Variation in supply frequency	----	+/- 3 Hz

**11. PCU/ARRAY SIZE RATIO:**

11.1 The combined wattage of all inverters should not be less than rated capacity of power plant under STC.

11.2 Maximum power point tracker shall be integrated in the PCU/inverter to maximize energy drawn from the array.

**12. EARTHING AND LIGHTNING PROTECTION SYSTEM**

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

**12.1. LIGHTNING PROTECTION:** 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 varistors (MOVs) and suitable earthing such that induced transients find an alternate route to earth.

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

**12.3. EARTHING PROTECTION:**

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

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

**12.4 GRID ISLANDING:**

i. 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.

ii. 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

### **13. POWER CONSUMPTION:**

Regarding the generated power consumption, priority need to give for internal consumption first and thereafter any excess power can be exported to grid. Finalization of tariff is not under the purview of TSREDCO or MNRE. Decisions of appropriate authority like DISCOM, state regulator may be followed.

### **14. CIVIL WORKS:**

This section of the specification covers entire civil engineering work for technological structures, new equipment and facilities for all production, auxiliary and ancillary units, foundation for all structures and main equipment described elsewhere in this specification on a Turnkey basis for installation of the Solar PV power plant.

The scope shall cover complete civil engineering work for the proposed plant within its battery limit, on turnkey basis including design, supply of all materials and execution.

### **15. PROJECT SCHEDULE & PROGRESS MONITORING**

Bidder/Bidding Consortium shall submit Overall schedule along with the offer. The overall schedule should be planned in weeks. The heads to be covered in the schedules shall broadly be as follows:

- i. Basic engineering and approval
- ii. Preparation and issue of ordering / technical specifications for sub vendors
- iii. Placement of orders on sub-vendors
- iv. Detailed design and engineering
- v. Submission and approval of drawings for civil & structural works
- vi. Manufacture and supply of all equipment/ piping/ cables, etc
- vii. Fabrication and supply of building and technological structures
- viii. Submission and approval of erection drawings and manuals
- ix. Erection of building and technological structures
- x. Erection of equipment, piping, cables, etc.
- xi. Testing and commissioning



The major milestones for the project are to be highlighted in the schedule. The Bidder/Bidding Consortium shall submit an overall erection plan for the plant and equipment under his scope of supply along with the tender.

The successful Bidder/Bidding Consortium shall have to submit the Level-II network schedule both in hard and editable soft copy (in MS Project/Primavera) covering further details of construction, fabrication and erection activities, area-wise, for approval and finalization of the Employer / Consultant. The format of progress report to be discussed and agreed.

The Bidder/Bidding Consortium/Bidding Consortium has to clearly specify to complete the work as per terms and conditions of agreement.

## **16. DRAWINGS, DATA AND DOCUMENTS**

The Bidder/Bidding Consortium shall furnish following documents/ information along-with the offer.

- General description of equipment offered specifying the important features, make, technical parameters, materials of construction, etc. to enable the owner to have proper understanding of the equipment offered and its operation.
- Technical literature, catalogue and publications
- Layout of Complete Power Plant Installation showing location of all major sub-systems
- Single line diagrams of all systems and sub systems of the entire power plant including that of the MMS structures.
- Typical general arrangement and foundation details
- General lighting scheme
- Type tests certificates of all major equipments like switchgear, Inverters, Solar Modules etc.
- Single line schematic diagram of electrical system for grid interfacing and grid interconnection from Solar plant
- General arrangement drawings and circuit diagrams of Module, Inverters, Transformers, and overall solar plant arrangement
- The Bidder/Bidding Consortium shall submit a list of all drawings and documents proposed to be submitted. The list will be approved by employer/ consultant and may be modified if necessary
- Each drawing/ documents in the list shall be identified with a serial number, description and scheduled date of submission.

**For Approval:**

- Equipment layout plan
- Single line diagram with rating of all equipment, cable sizes and details of protection and metering
- Front view, general arrangement of equipment with plan and sectional views; clearly showing the position of various components, and clearance between components. The make and type of components, together with vital technical parameters shall also be furnished along with GA drawings
- Control, alarm, indications, interlocking and other schematics
- Lighting layout drawings with illumination levels, type and make of fittings.
- Wiring terminal plan drawings with cable connections
- Earthing scheme and layout of earthing network with design calculations, for outdoor switch yard and other areas/premises, if applicable.
- Cable layout drawings, cable channels details
- Installation drawings of all equipment with layout of equipment, cables, lighting systems, (if applicable) and earthing network.
- Calculation for design of LT busduct, sizing of busbars, busbar supports considering the temperature rise and fault current.
- Calculations for design of supporting structures for outdoor switchyard w.r.t. wind pressure, short circuit forces etc. (if applicable).

**Instruction Manuals for Operation & Maintenance**

- Complete and comprehensive instruction manuals for operation and maintenance of the equipment with drawings. This shall include the following:
  - Preventive maintenance schedule for each equipment
  - Procedure for shut down and start-up of the entire power plant
  - Safety procedures for safe operation of equipment and complete system
  - Specification of equipments installed.
  - Test procedure for site tests

Upon installation and commissioning supplier shall incorporate revisions/modifications if any in the reproducible and submit 'as built' drawings for employer's record as per general condition of contract.

**17. DELIVERY**

The completion period of the project is limited to 4 months. No further extension shall be provided except under Force Majeure.

## 18. INSTALLATION GUIDELINES

- All the electrical installations shall conform to the Indian Electricity Act, Indian Electricity Rules, and regulations.
- The mechanical and Civil installation shall conform to the applicable Acts and Rules of corresponding Inspectorate and other relevant authorities, if any.
- Provision of cable glands, ferrules, cable lugs, tags, sealing kits shall be arranged.
- Supply and installation of first aid boxes, shock treatment charts, rubber mats, and key board etc.
- Erection, testing and commissioning of various equipment shall be done strictly as per manufacturer's instructions.
- Cables shall be laid in conduits as per the electrical installation procedures
- The minimum bending radius of cables shall be 12D and 15D for LT and LT cable respectively.
- Interplant cable shall be laid to trenches, tunnel or overhead structure as per site condition. Digging and refilling of cable trenches, required erection accessories shall be in the scope of work of the Bidder/Bidding Consortium.
- Cable shall be fixed to cable racks or cable trays or run on cleats or in conduits, which shall be fixed to concrete brick work or steel structure as required for proper support of the cables, easy accessibility and neatness of appearance.
- Perforated trays shall be provided for control cables.
- Approved type of danger boards, boards inscribing 'ISOLATED', 'DO NOT CLOSE, MEN AT WORK' in English, Telugu, Hindi and Local languages shall be provided in sufficient numbers.
- Special care shall be taken to make the enclosed equipment protected against entry of rats, lizard, and creeping reptiles which may create electrical short circuits.
- Approved cable markers of reinforced concrete shall be provided and fixed to mark each and every diversion of all buried cable routes. A marker shall also be placed every 50 meters along straight portions of each route. A concrete cable marker shall also be provided and fixed to mark the position of every buried joints.
- Distinguishing labels of non-corrodible material marked in accordance with the cable numbers of the cabling diagram shall be permanently attached to each end of every cable. The phase or polarity of each power cable core at the cable ends shall be identified.
- Mounting of Inverters, Electrical panels, Dc and Ac junction boxes, Monitoring systems shall be done with proper mounting procedures with neat look.

## 19. ERECTION, TESTING, COMMISSIONING

The scope of work of the Bidder/Bidding Consortium shall be complete erection of the equipment, cables, auxiliary systems and sub systems under the scope of work. The Bidder/Bidding Consortium shall make all arrangements to deliver the equipment at site by wagons/ trucks/ trailers, build his own stores (covered, uncovered, air-conditioned, if necessary) for the proper storage of equipment, maintain the stores and all related documents and records, transport the equipment to site for erection purpose. The Bidder/Bidding Consortium also shall make all security arrangements.

- The Bidder/Bidding Consortium shall be responsible for proper, quick retrievable and neat storage and also undertake the conservation of all consignments including damaged boxes. During storage of equipment, the Bidder/Bidding Consortium shall take into account deterioration and carry out the re-conservation of the complete equipment/parts/supplies as may be necessary as per the storage instructions of the Manufacturer of equipment/ components. The Bidder/Bidding Consortium shall also supply the consumables required for such re-conservation work and repair/ replace parts required thereof for the proper functioning of the equipment after erection and commissioning.
- The Bidder/Bidding Consortium shall retrieve the equipment/ materials from stores and transport the same to erection site.
- The Bidder/Bidding Consortium shall unpack and do visual checking against physical damages to the equipment/cases, clean equipment before start of erection. Damage/ shortage, if any, shall be reported to the Employer/ Consultant and shall be rectified/replaced expeditiously, so as not to upset the erection and commissioning schedule.
- The Bidder/Bidding Consortium shall provide all necessary erection equipment and tools & tackles including material handling equipment, cranes, compressors and other equipment and instruments and consumables, all commissioning equipment and instruments, welding equipment, winches, alignment tools, precision levels, etc., which may be required for carrying out the erection and commissioning work efficiently.
- All instruments shall be properly calibrated before use. Unless otherwise specified, the above erection equipment/ materials shall be the property of the Bidder/Bidding Consortium. However, Employer's prior permission shall be required for removal of these erection equipment/ materials from the site. The Bidder/Bidding Consortium shall ensure that proper procedure and documentation is maintained at entry gate of Employer's premises for such items as might be carried back by the Bidder/Bidding Consortium after completion of work.

- The Bidder/Bidding Consortium shall provide erection consumables like oxygen and acetylene gas, welding rods, solder lugs, oil, grease, kerosene, cotton waste, etc. required for erection of equipment and steel structures.
- The Bidder/Bidding Consortium shall construct and maintain his own site offices and stores as required for the work and arrange for maintaining in the area placed at the Bidder/Bidding Consortium's disposal in a neat manner.
- The Bidder/Bidding Consortium shall provide his scheme for mobilization with Bar Chart indicating clearly the resources, manpower and machinery proposed to be deployed to ensure timely completion of work and quality of workmanship
- On request, the Employer may help the Bidder/Bidding Consortium by providing any special handling/construction equipment needed in the interest of work subject to availability and on payment of hire charges and other conditions of Employer. The charges shall be recovered from any bill of the Bidder/Bidding Consortium due immediately thereafter.
  - o All safety, health and pollution control measures as required to be adopted as per the Statutory Regulations and the Safety conditions for Bidder/Bidding Consortiums issued along with the tender or otherwise required or implied by statutory regulations or practices shall be strictly followed by the Bidder/Bidding Consortium during the execution of the Contract. The Bidder/Bidding Consortium shall set up a suitable safety organization of his own at site in this regard.
- Labor facilities such as shelter, food shall be arranged by the Bidder/Bidding Consortium. On request drinking water shall be provided by the employer.
- The Employer shall deploy/supply Supervising/operating & maintenance personnel and all raw materials, utilities & services required for commissioning.
- Auxiliary power supply facility for system testing & commissioning, Inverter auxiliary, luminaries, control room, Inverter room, site office and other power consuming areas shall be provided by the Employer
- The results of pre commissioning Test, start-up tests and commissioning report shall be recorded jointly by the Bidder/Bidding Consortium and the TSREDCO. And a cumulative report shall be duly submitted by the Bidder/Bidding Consortium to
- The Bidder/Bidding Consortium shall rectify the defects observed during the Commissioning period promptly.
- Successfully commissioning as be accepted if the complete system remains synchronized with the grid for a period of 48 hours without any disturbance or interruption. During this period the system shall generate power during sunshine hours and export power to the grid and during dark hours shall remain synchronized with the grid. If there is an outage isolation from the grid during this period due to defects in the system, then commissioning period shall start afresh after rectification of the said defect.

However if the ambient or the grid parameter are beyond the specified limits if any shall not be considered as stoppage.

- The Commissioning and project completion certificate shall be issued by the Employer subject to relevant conditions.

## 20. CONNECTIVITY

The maximum capacity for interconnection with the grid at a specific voltage level shall be as specified in the Distribution Code/Supply Code of the State and amended from time to time. Following criteria have been suggested for selection of voltage level in the distribution system for ready reference of the solar suppliers.

Plant Capacity	Connecting voltage
Up to 10KW	230- Single Phase or 415V - three phase at the option of the consumer/ beneficiary
Above 10kW	At 415V - three phase or HT/EHT level (11kV/33kV/66kV) as per DISCOM rules

- The maximum permissible capacity for rooftop shall be 1 MW for a single net metering point.
- Utilities may have voltage levels other than above; DISCOMS may be consulted before finalization of the voltage level and specification be made accordingly.
- For large PV system (Above 100 kW) for commercial installation having large Load, the solar power can be generated at low voltage levels and stepped up to 11 kV level through the step up transformer. The transformers and associated switchgear would require to be provided by the SPV bidders.

## 21. TOOLS & TACKLES AND SPARES:

- After completion of installation & commissioning of the power plant, necessary tools & tackles are to be provided free of cost by the bidder for maintenance purpose. List of tools and tackles to be supplied by the bidder for approval of specifications and make from TSREDCO.
- 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 supplied along with the equipment. 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

**22. DANGER BOARDS AND SIGNAGES:**

Danger boards should be provided as and where necessary as per IE Act. /IE rules as amended up to date. Three signage shall be provided one each at battery -cum- control room, solar array area and main entry from concerned building/block. Text of the signage may be finalized in consultation with TSREDCO/ Beneficiary Department.

**23. FIRE EXTINGUISHERS:**

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

- a) Portable fire extinguishers in the control room for fire caused by electrical short circuits
- b) Sand buckets in the control room
- c) 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.

**24. Technical Specifications:**

- 1) The Solar panels to be used in this project should be from Indian manufacturers certified by the Ministry of New & Renewable Energy (MNRE).
- 2) The SPV panels shall carry a warranty of minimum 25years.
- 3) The SPV panel must be warranted for their output peak watt capacity which shall not be less than 90% at the end of 10years and 80% at the end of 25years.
- 4) In addition any components those are to be used in the project should have the certification of MNRE.

**25. PLANNING AND DESIGNING:**

- i. The bidder should carry out Shadow Analysis at the site and accordingly design strings & arrays layout considering optimal usage of space, material and labor. The bidder should submit the array layout drawings along with Shadow Analysis Report to TSREDCO for approval.
- ii. TSREDCO 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.
- iii. The bidder shall submit preliminary drawing for approval & based on any modification or recommendation, if any. The bidder submits three sets and soft copy in CD of final drawing for formal approval to proceed with construction work.

**26. TRANSFORMER “IF REQUIRED” & METERING:**

- i. Dry/oil type relevant kVA, 11kV/415V, 50 Hz Step up along with all protections, switchgears, Vacuum circuit breakers, cables etc. along with required civil work.
- ii. The bidirectional electronic energy meter as per the requirement shall be installed for the measurement of import/Export of energy.
- iii. The bidder must take approval/NOC from the Concerned DISCOM for the connectivity, technical feasibility, and synchronization of SPV plant with distribution network and submit the same to TSREDCO before commissioning of SPV plant.
- iv. Reverse power relay shall be provided by bidder (if necessary), as per the local DISCOM requirement.





## SECTION - VI

# OTHER PROVISIONS

SECTION - VI  
OTHER PROVISIONS

1 ROLE OF BENEFICIARY DEPT.

It is envisaged that the beneficiary Dept. shall appoint any officer who will provide necessary support to facilitate the required approvals and sanctions in a time bound manner so as to achieve commissioning of the Projects within the scheduled Timeline. This may include facilitation in the following areas:

The beneficiary Dept. shall undertake the following activities also to achieve the objectives of speedy establishment and implementation of Solar Power Plant in the Host Area

- a. Obtain statutory & non-statutory clearances and to make area development plan within project location.
  - b. Frame out transparent project land allotment/right to use policy and specify procedures pursuant to the relevant State policies and their amendments thereof.
  - c. Enter into Right to Use/ Lease agreement and give possession of land within 03 (Three) months from the Effective Date of the PPA to the SPD for the entire period of the Project.
  - d. Coordination among various State and Central agencies for speedy implementation of projects
  - e. Support during commissioning of projects and issue of commissioning certificates.
- While it will be the endeavor of the beneficiary Dept.as described above to facilitate support in their respective area of working but nevertheless, SPD shall be overall responsible to complete all the activities related to Project Development at its own risk and cost.

2 SCOPE MATRIX

The scope matrix indicating roles and responsibilities of beneficiary Dept. and SPD are indicated on the table below:-

S. No	KEY FUNCTIONS	ROLE/ RESPONSIBILITY
1	Providing the shadow free Rooftop/ Land/Plot	Beneficiary Dept.
2	Internal Water Supply Arrangement	Beneficiary Dept.
3	Land Leveling/Roof clearing	SPD
4	Illumination System (For Primary Pathways)	SPD
5	Construction of Cable Tray	SPD
6	Construction of Office Complex (if required)	SPD
7	Construction of Boundary Wall/ Fencing for the projects (where ever required)	SPD
8	O & M Services	SPD
9	Construction Power Arrangement from plant to 230/440/11 KV existing Line	SPD
10	Approval from TSTRANSCO/TS DISCOMS/CEIG / Electrical Inspectorate, etc.	SPD

#### **4 SCOPE OF SPD**

##### **4.1 LIGHTING**

Lighting has been planned along the path & walkways. Area lighting shall be provided for safety and operational needs.

##### **4.2 DRAINAGE SYSTEM (where ever required)**

Keeping in view of the topography of the area necessary cutting, filling & leveling work shall be taken up to have different benches suitable to our plant requirement as well as compatible with the Road network.

##### **4.3 SECURITY (If Required)**

Multilevel security arrangements to be provided, such as deployment of security personal at entry gate, patrolling boundary lines & other strategic location. (Where ever required)

##### **4.4 BUILDING CONTROL ROOM**

It is proposed to a build a suitable control room for the Solar Project. (Where ever required)

##### **4.5 WEATHER MONITORING STATION (WMS)**

One No. of Weather Monitoring Station (WMS) shall be developed for monitoring rainfall, solar radiation, wind speed, atmospheric pressure, temperature and other necessary parameters on real-time basis. This Weather Monitoring System should be SCADA compatible & work in line with Sub-station SCADA System.

##### **4.6 CONSTRUCTION POWER: To be arranged by the SPD.**

##### **4.7 WATER RESOURCE: To be made available by the SPD.**



## SECTION - VII

# FINANCIAL BID

SECTION-VII

**FINANCIAL BID**

(On the official Letterhead of the firm)

(To be submitted in a separate envelope)

Design, Supply, Installation, Commissioning, Maintenance and Operation of **1200KWp Grid Connected Ground Mounted power plants at 8 locations of each 150KWp at Vijaya Dairy plants of TSDDCFL, Telangana under RESCO mode**

Project Type	Levellised cost for supply of power for 25 years from Grid Connected Solar PV Power Plant as per MNRE/TSREDCO/TRANSCO/DISCOM Specifications under Net Metering Scheme under RESCO MODE (Rs./KWh)	
	In Figures	In Words
Design, Supply, Installation, Commissioning, Maintenance and Operation of <b>1200KWp Grid Connected Ground Mounted power plants at 8 locations of each 150KWp at Vijaya Dairy plants of TSDDCFL, Telangana under RESCO mode</b>		

**Certified that:**

1. The bidder has to quote unit rate only and will be uniform for the entire 25 years period.
2. above rates are in accordance with specifications & various terms & conditions mentioned in the tender document.
3. The rates are inclusive of all taxes and duties of Govt. of Telangana as well Govt. of India prevailing from time to time.
4. Amount shall be quoted in INR / kWh up to two decimal places.
5. In the event of any discrepancy between the values entered in figures and in words, the values entered in words shall be considered.

Authorized Signature:

Name:

Designation:

Name & Address of the Company/Consortium



## SECTION - VIII

# SAMPLE FORMS & FORMATS FOR BID SUBMISSION

**Format-I  
Covering Letter**

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

**BIDDERS UNDERTAKING COVERING LETTER  
(Letter shall be submitted on Bidder(s) Letter Head)**

Ref No:

Date:

To

**The V.C & Managing Director**

**Telangana State Renewable Energy Development Corporation Limited (TSREDCO)**

Corporate Office: D.No. 6-2-910, Visvesvaraya Bhavan,

The Institution of Engineers Building, Khairatabad, Hyderabad - 500 004.

Telangana State, India

**Dear Sir,**

**Sub:** Design, Supply, Installation, Commissioning, Maintenance and Operation of Grid connected Solar Power plants under State Net Metering Policy- reg.

**Tender Reference: TSREDCO/ SE/S PV/ Govt./ VIJAYA DAIRY/ RESCO/ 2020, Dt.09.11.2020**

\*\*\*\*

1. We have examined the Tender for Supply, Installation and Commissioning of Grid connected Solar Power plants as specified in the Tender. We undertake to meet the requirements and services as required and as set out in the Tender document.
2. We attach our Technical Bid and Financial Bid in separate sealed covers as required by the Tender both of which together constitute our proposal, in full conformity with the said Tender.
3. We have read the provisions of Tender and confirm that these are acceptable to us. We further declare that additional conditions, variations, deviations, if any, found in our response shall not be given effect to.
4. We undertake, if our Bid is accepted, to adhere to the requirements as specified in the Tender or such modified plan as may subsequently be agreed.
5. We agree to unconditionally accept all the terms and conditions set out in the Tender document and also agree to abide by this Bid response for a period as mentioned in the Tender from the date fixed for bid opening and it shall remain binding upon us with full force and virtue, until within this period a formal contract is prepared and executed, this Bid response, together with your written acceptance thereof in your notification of empanelment, shall constitute a binding contract between us and TSREDCO.
6. We affirm that the information contained in the Technical Bid or any part thereof, including its schedules, and other documents, etc., delivered or to be delivered to TSREDCO is true, accurate, and complete. This proposal includes all information necessary to ensure that the statements therein do not in whole or in part mislead TSREDCO as to any material fact.
7. We also agree that you reserve the right in absolute sense to reject all or any of the products/ service specified in the bid response without assigning any reason whatsoever.
8. It is hereby confirmed that I/We are entitled to act on behalf of our company/ organization and empowered to sign this document as well as such other documents, which may be required in this connection.
9. We agree to use only indigenous PV modules in this project.
10. We also declare that our Company/Organisation is not blacklisted by any of the State or Central Government and organisations of the State or Central Government.
11. We undertake to use the BOS components other than PV Modules and Solar grid tie Inverters as per the standards stipulated.

Signature of the authorised person:

Name of the authorised person:

Designation:

Name and Address of Bidder

Stamp of bidder

**CERTIFICATE AS TO AUTHORISED SIGNATORIES**

I, certify that I am (Name) ..... (Designation) ....., and that (Name)..... who signed the above Bid has been duly authorized to sign the same on behalf of our Organisation.

Date:

Signature:

Seal:

TSREDCO



**Format-II**

**FORMAT FOR BANK GUARANTEE FOR - EARNEST MONEY DEPOSIT**

This deed of Guarantee made on..... day of Month & Year by Name & Address of the bank (hereinafter called the „GUARANTOR“) on the one part, on behalf of M/s Name & address of the Firm (hereinafter called the “Firm”) ) in favour of VC& Managing Director, TSREDCO, Hyderabad on the following terms and conditions.

Whereas the FIRM is submitting its tender for (Name of the work) and this guarantee is being made for the purpose of submission of Earnest money deposit with the tender document.

Know all people by these presents that the GUARANTOR, hereby undertake to indemnify and keep TSREDCO indemnified up to the extent of Rs.....during the validity of this bank guarantee and authorize TSREDCO to recover the same directly from the GUARANTOR. This bank guarantee herein contained shall remain in full force and effect till the expiry of its validity or till any extended period (if extended by the bank on receiving instructions from FIRM.). The liability under the guarantee shall be binding on the GUARANTOR or its successors.

Whereas the GUARANTOR further agrees that their liability under this guarantee shall not be affected by any reason of any change in the offer or its terms and conditions between the FIRM and TSREDCO with or without the consent or knowledge of the GUARANTOR.

Whereas the GUARANTOR further agrees to pay guaranteed amount hereby under or part thereof, on receipt of first written demand whenever placed by TSREDCO during the currency period of this guarantee. The GUARANTOR shall pay TSREDCO immediately without any question, demure, reservation or correspondence.

Whereas the GUARANTOR hereby agrees not to revoke this guarantee bond during its currency period except with the previous consent of TSREDCO in writing.

Notwithstanding anything contained herein

1. Our liability under this bank guarantee shall not exceed Rs. ....
2. This Bank guarantee shall be valid up to .....

3. We are liable to pay the guaranteed amount or any part thereof under this bank guarantee only and only against the written claim or demand on or before ..... Sealed with the common seal of the bank on this .....day of Month and Year

**Witness :**

1.

2

(Signature and seal of Bank)

TSREDCO

**Format-III**

**FORMAT FOR PERFORMANCE BANK GUARANTEE (PBG)**

{To be submitted for the Allocated capacity in different locations of Telangana state at the time of Project allocation separately}

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

In consideration of the ----- [Insert name of the Bidder] (hereinafter referred to as selected Solar Power Developer') submitting the response to Tender inter alia for selection of the Project under RESCO MODE of the capacity of \_\_\_\_ kWp / MWp, at .....[Insert location details] under Roof Top scheme in response to the Tender no.....dated..... issued by Telangana State Renewable Energy Development Corporation Limited (hereinafter referred to as TSREDCO) and TSREDCO considering such response to the Tender of .....[insert the name of the selected Solar Power Developer] (which expression shall unless repugnant to the context or meaning thereof include its executers, administrators, successors and assignees) and selecting the Solar Power Project of the Solar Power Developer and issuing Letter of allocation No ----- to (Insert Name of selected Solar Power Developer) as per terms of Tender and the same having been accepted by the selected SPD or a Project Company, M/s ----- {a Special Purpose Vehicle (SPV) formed for this purpose}, if applicable ]. As per the terms of the Tender, the \_\_\_\_\_ [insert name & address of bank] hereby agrees unequivocally, irrevocably and unconditionally to pay to TSREDCO at [Insert Name of the Place from the address of the TSREDCO] forthwith on demand in writing from TSREDCO or any Officer authorised by it in this behalf, any amount upto and not exceeding Rupees----- [Total Value] only, on behalf of M/s \_\_\_\_\_ [Insert name of the selected Solar Power Developer / Project Company]

This guarantee shall be valid and binding on this Bank up to and including..... and shall not

be terminable by notice or any change in the constitution of the Bank or the term of contract or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to Rs. \_\_\_\_\_

Our Guarantee shall remain in force until.....

TSREDCO shall be entitled to invoke this Guarantee till .....

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

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

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

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

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

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

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

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rs. \_\_\_\_\_ (Rs. \_\_\_\_\_ only) and it shall remain in force until

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

Signature \_\_\_\_\_

Name \_\_\_\_\_

Power of Attorney No. \_\_\_\_\_

For \_\_\_\_\_[Insert Name of the Bank]\_\_\_\_ Banker's Stamp and Full Address.

Dated this \_\_\_\_ day of \_\_\_\_, 20\_\_

Witness:

1. ....

2.....

Signature

Signature

Name and Address

Name and Address

Notes:

1. The Stamp Paper should be in the name of the Executing Bank and of Appropriate value.

2. The Performance Bank Guarantee (PBG) shall be executed by any scheduled Bank

**Format-IV**

**FORMAT FOR BID SECURITY**

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

Ref. \_\_\_\_\_

Bank Guarantee No. \_\_\_\_\_

Date: \_\_\_\_\_

In consideration of the -----[Insert name of the Bidder] (hereinafter referred to as 'Bidder') submitting the response to Tender inter alia for selection of the Project under RESCO route of the capacity of \_\_\_\_ MWp in the Telangana. State for the districts as indicated in Tender) in response to the Tender No. \_\_\_\_\_ dated \_\_\_\_ issued by Telangana State Renewable Energy Development Corporation Limited (hereinafter referred to as TSREDCO) and TSREDCO considering such response to the Tender of .....[insert the name of the Bidder] as per the terms of the Tender, the \_\_\_\_\_ [insert name & address of bank] hereby agrees unequivocally, irrevocably and unconditionally to pay to TSREDCO at [Insert Name of the Place from the address of TSREDCO] forthwith on demand in writing from TSREDCO or any Officer authorized by it in this behalf, any amount up to and not exceeding Rupees ----- only, on behalf of M/s. \_\_\_\_\_ [Insert name of the Bidder]

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

Our liability under this Guarantee is restricted to Rs. \_\_\_\_\_ (Rs. \_\_\_\_\_ only). Our Guarantee shall remain in foVijaya Dairy until \_\_\_\_\_. TSREDCO shall be entitled to invoke this Guarantee till \_\_\_\_ [Insert date which is 30 days after the date in the preceding sentence].

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

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

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by ----- [Insert name of the Bidder]

and/or any other person. The Guarantor Bank shall not require TSREDCO to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against TSREDCO in respect of any payment made hereunder.

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

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

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

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

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rs. \_\_\_\_\_ (Rs. \_\_\_\_\_ only) and it shall remain in force until \_\_\_\_\_ [Date to be inserted on the basis condition of this Tender] with an additional claim period of thirty (30) days thereafter. We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if TSREDCO serves upon us a written claim or demand.

Signature \_\_\_\_\_

Name \_\_\_\_\_

Power of Attorney No. \_\_\_\_\_

For \_\_\_\_\_ [Insert Name of the Bank] \_\_\_\_\_ Banker's Stamp and Full Address.

Dated this \_\_\_\_ day of \_\_\_\_, 20\_\_

**Format-V**

**POWER OF ATTORNEY**

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

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

Know all men by these presents, We .....

(name and address of the registered office of the Bidding Company as applicable) do hereby constitute, appoint and authorize Mr./Ms. .... (name& residential

address) who is presently employed with us and holding the position of ..... as our true and lawful attorney, to do in our name and on

our behalf, all such acts, deeds and things necessary in connection with or incidental to submission of our Bid for implementation of grid connected Roof top solar PV scheme in the State\_\_ in response to the NIT No .....,dated ..... issued by Telangana State Renewable Energy Development Corporation Ltd, (TSREDCO), including signing and submission of the Bid and all other documents related to the Bid, including but not limited to undertakings, letters, certificates, acceptances, clarifications, guarantees or any other document which the TSREDCO may require us to submit. The aforesaid Attorney is further authorized for making representations to the TSREDCO and providing information / responses to TSREDCO representing us in all matters before TSREDCO, and generally dealing with TSREDCO in all matters in connection with Bid till the completion of the bidding process as per the terms of the above mentioned NIT.

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

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

Signed by the within named

..... (Insert the name of the executant company)

through the hand of

Mr. ....

duly authorized by the Board to issue such Power of Attorney

Dated this ..... day of .....

Accepted.....

Signature of Attorney

(Name, designation and address of the Attorney)

Attested

.....

(Signature of the executant)  
(Name, designation and address of the executant)

.....  
Signature and stamp of Notary of the place of execution

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

**WITNESS**

1. ....

(Signature)

Name.....

Designation .....

2. ....

(Signature)

Name.....

Designation .....

**Notes:**

The mode of execution of the power of attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and the same should be under common seal of the executant affixed in accordance with the applicable procedure. Further, the person whose signatures are to be provided on the power of attorney shall be duly authorized by the executant(s) in this regard.

The person authorized under this Power of Attorney, in the case of the Bidding Company / Lead Member being a public company, or a private company which is a subsidiary of a public company, in terms of the Companies Act, 1956, with a paid up share capital of more than Rupees Five crores, should be the Managing Director / whole time director/manager appointed under section 269 of the Companies Act, 1956. In all other cases the person authorized should be a director duly authorized by a board resolution duly passed by the Company.

Also, wherever required, the executant(s) should submit for verification the extract of the chartered documents and documents such as a Board resolution / power of attorney, in favour of the person executing this power of attorney for delegation of power hereunder on behalf of the executant(s).



**Format-VI**

**CONSORTIUM AGREEMENT**

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

THIS Consortium Agreement (“Agreement”) executed on this \_\_\_\_\_ day of \_\_\_\_\_ 2020 between M/s [insert name of Lead Member] \_\_\_\_\_ a Firm / Company incorporated under the laws of \_\_\_\_\_ and having its Registered

Office at \_\_\_\_\_ (hereinafter called the “Lead Member”, which expression shall include its successors, executors and permitted assigns)

And M/s \_\_\_\_\_ a Firm / Company incorporated under the laws of \_\_\_\_\_ and having its Registered Office at \_\_\_\_\_ (hereinafter called the “Technical Member”, which expression shall include its successors, executors and permitted assigns), which expression shall include its successors, executors and permitted assigns)

WHEREAS, each Member individually shall be referred to as the “Member” and both the Members shall be collectively referred to as the “Members” in this Agreement.

WHEREAS the Telangana State Renewable Energy Development Corporation Ltd Limited(hereinafter called TSREDCO) , a Company incorporated under the Company’s Act, 1956 has invited response to Tender No. \_\_\_ dated \_\_\_ for design, manufacture, supply, erection, testing and commissioning including warranty, operation & maintenance of Roof Top Solar PV power system under RESCO MODE.

WHEREAS the Tender documents stipulate that the Lead Member may enter into a Technical Consortium Agreement with another Company / Corporate entity to fulfill the Technical Eligibility Criteria as stipulated in the Tender document. The Members of the Bidding Consortium will have to submit a legally enforceable Consortium Agreement in a format enclosed with the Tender document.

NOW THEREFORE, THIS AGREEMENT WITNESSTH AS UNDER:

In consideration of the above premises and agreements all the Members in this Consortium do hereby mutually agree as follows:

1. We, the Members of the Consortium and Members to the Agreement do hereby unequivocally agree that (M/s \_\_\_\_\_), shall act as the Lead Member as defined in the Tender for self and agent for and on behalf of Technical Member \_\_\_\_\_.
2. The Lead Member is hereby authorized by the Technical Member of the Consortium to bind the Consortium and receive instructions for and on their behalf.
3. The Lead Member shall be liable and responsible for ensuring the individual and collective commitment of each of the Members of the Consortium in discharging all of their respective obligations. Each Member further undertakes to be individually liable for the performance of its part of the obligations without in any way limiting the scope of collective liability envisaged in this Agreement.
4. Subject to the terms of this Agreement, the Technical member shall be responsible for providing technical knowledge for “Design, Manufacture, Supply, Erection, Testing and Commissioning including Warranty, Operation & Maintenance” to the lead member.

5. In case of any breach of any commitment by any of the Consortium Members, the Lead Member shall be liable for the consequences thereof.

6. This Agreement shall be construed and interpreted in accordance with the Laws of India and courts at Delhi alone shall have the exclusive jurisdiction in all matters relating thereto and arising there under.

7. It is hereby further agreed that in case of being shortlisted, the Members do hereby agree that they shall abide by the terms & conditions of the TENDER BID document.

8. It is further expressly agreed that this Agreement shall be irrevocable and shall form an integral part of the Tender submitted to TSREDCO and shall remain valid till completion of the job assigned to the Contractor.

9. The Lead Member is authorized and shall be fully responsible for the accuracy and veracity of the representations and information submitted by the Members respectively from time to time in the response to Tender.

10. It is hereby expressly understood between the Members that no Member at any given point of time, may assign or delegate its rights, duties or obligations under this agreement without the explicit permission of TSREDCO.

11. This Agreement

(a) Has been duly executed and delivered on behalf of each Member hereto and constitutes the legal, valid, binding and enforceable obligation of each such Member;

(b) Sets forth the entire understanding of the Members hereto with respect to the subject matter hereof; and

(c) May not be amended or modified except in writing signed by each of the Members and with prior written consent of TSREDCO.

IN WITNESS WHEREOF, the Members have, through their authorised representatives, executed these present on the Day, Month and Year first mentioned above.

For M/s-----[Lead Member] -----  
(signature, Name & Designation of the person authorized vide Board Resolution Dated [●])

**Witnesses:**

1) Signature----- 2) Signature -----

Name: Name:

Address: Address:

For M/s-----

[Technical Member] -----

(signature, Name & Designation of the person authorized vide Board Resolution Dated [●])

Witnesses:

**DOCUMENTS REQUIRED FOR PROJECT SANCTION**

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

1. Agreement between the bidder and the owner of the Project and Building/Roof top (Notarised original agreement on stamp paper of appropriate value should be enclosed).
2. All Agreement shall generally have reference to the TSREDCO's Tender No. and Letter of Allocation and provisions as per terms and conditions, technical specification and performance parameter in line with the TSREDCO's Tender Document against which Letter of Allocation has been issued. In addition, it shall indicate the price / tariff payable by the roof top Owner to the developer, payment terms, completion period along with other conditions of contract like insurance, warranty, force majeure, arbitration, jurisdiction, governing law, site access for the developer, and, site access for TSREDCO officials for the entire plant life, obligation of the roof top owner regarding providing of data to TSREDCO as per the TENDER BID Document etc.
3. No Objection Certificate from the concerned DISCOM for grid connectivity or CEIG approval (In case CEIG approval is suffice for grid connectivity). Undertaking of Successful Bidder on stamp Paper for indemnification of TSREDCO shall be furnished in case approval of CEIG is only furnished for grid connectivity.

(Not mandatory during project identification, however mandatory for project commissioning/operation).

4. Summary Project Report as per Format at Annexure.

**OPERATION AND MAINTENANCE GUIDELINES OF GRID CONNECTED PV PLANTS**

1. Periodic cleaning of solar modules, preferably once every fortnight.
2. O&M of Solar Power Plant shall be compliant with grid requirements to achieve committed energy generation.
3. Periodic checks of the Modules, PCUs and BoS shall be carried out as a part of routine preventive and breakdown maintenance.
4. Immediate replacement of defective Modules, Invertors/PCUs and other equipment as and when required.
5. Supply of all spares, consumables and fixtures as required. Such stock shall be maintained for all associated equipments and materials as per manufacturer/ supplier's recommendations.
6. All the equipment testing instrument required for Testing, Commissioning and O&M for the healthy operation of the Plant shall be maintained by the Bidder. The testing equipments must be calibrated once every 2 years from NABL accredited labs and the certificate of calibration must be kept for reference as required.

7. If negligence/ mal-operation on part of the Bidder's operator results in failure of equipment, such equipment should be repaired/ replaced by the Bidder free of cost.
8. If any jobs covered in O&M Scope as per TENDER BID are not carried out by the contractor/ Bidders during the O&M period, the Engineer-In-Charge shall take appropriate action as deemed fit.
9. TSREDCO reserves the right to make surprise checks/ inspection visits at its own or through authorized representative to verify the O&M activities being carried out by the Bidder. Failure to adhere to above guidelines will result in penal action including debarring from participation in next tender.

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

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

**Solar PV Modules/Panels**

IEC 61215/ IS 14286	Design Qualification and Type Approval for Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
IEC 61701	Salt Mist Corrosion Testing of Photovoltaic (PV) Modules
IEC 61853- Part 1/ IS 16170: Part 1	Photovoltaic (PV) module performance testing and energy rating -: Irradiance and temperature performance measurements, and power rating
IEC 62716	Photovoltaic (PV) Modules - Ammonia (NH3) Corrosion Testing (As per the site condition like dairies, toilets)
IEC 61730-1,2	Photovoltaic (PV) Module Safety Qualification - Part 1: Requirements for Construction, Part 2: Requirements for Testing
IEC 62804	Photovoltaic (PV) modules - Test methods for the detection of potential-induced degradation. IEC TS 62804-1: Part 1: Crystalline silicon (mandatory for applications where the system voltage is >600 VDC and advisory for installations where the system voltage is < 600 VDC)
IEC 62759-1	Photovoltaic (PV) modules - Transportation testing, Part 1: Transportation and shipping of module package units

**Solar PV Inverters**

IEC 62109-1, IEC 62109-2	Safety of power converters for use in photovoltaic power systems - Part 1: General requirements, and Safety of power converters for use in photovoltaic power systems Part 2: Particular requirements for inverters. Safety compliance (Protection degree IP 65 for outdoor mounting, IP 54 for indoor mounting)
IEC/IS 61683 (as applicable)	Photovoltaic Systems - Power conditioners: Procedure for Measuring Efficiency (10%, 25%, 50%, 75% & 90-100% Loading Conditions)
BS EN 50530 (as applicable)	Overall efficiency of grid-connected photovoltaic inverters: This European Standard provides a procedure for the measurement of the accuracy of the maximum power point tracking (MPPT) of inverters, which are used in grid-connected photovoltaic systems. In that case the inverter energizes

	a low voltage grid of stable AC voltage and constant frequency. Both the static and dynamic MPPT efficiency is considered.
IEC 62116/ UL 1741/ IEEE 1547 (as applicable)	Utility-inteVijaya Dairyonnected Photovoltaic Inverters - Test Procedure of Islanding Prevention Measures
IEC 60255-27	Measuring relays and protection equipment - Part 27: Product safety requirements
IEC 60068-2 (1, 2, 14, 27, 30 & 64)	Environmental Testing of PV System - Power Conditioners and Inverters a) IEC 60068-2-1: Environmental testing - Part 2-1: Tests - Test A: Cold b) IEC 60068-2-2: Environmental testing - Part 2-2: Tests - Test B: Dry heat c) IEC 60068-2-14: Environmental testing - Part 2-14: Tests - Test N: Change of temperature d) IEC 60068-2-27: Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock e) IEC 60068-2-30: Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle) f) IEC 60068-2-64: Environmental testing - Part 2-64: Tests - Test Fh: Vibration, broadband random and guidance
IEC 61000 - 2,3,5 (as applicable)	Electromagnetic Interference (EMI) and Electromagnetic Compatibility (EMC) testing of PV Inverters

### Fuses

IS/IEC 60947 (Part 1, 2 & 3), EN 50521	General safety requirements for connectors, switches, ciVijaya Dairyuit breakers (AC/DC):
	a) Low-voltage Switchgear and Control-gear, Part 1: General Rules
	b) Low-Voltage Switchgear and Control-gear, Part 2: CiVijaya Dairyuit Breakers
	c) Low-voltage switchgear and Control-gear, Part 3: Switches, dis connectors, switch-dis connectors and fuse-combination units
	d) EN 50521: Connectors for photovoltaic systems - Safety requirements and tests
IEC 60269-6	Low-voltage fuses - Part 6: Supplementary requirements for fuse-links for the protection of solar photovoltaic energy systems
<b>Surge Arrestors</b>	
IEC 62305-4	Lightening Protection Standard
IEC 60364-5-53/ IS 15086-5 (SPD)	Electrical installations of buildings - Part 5-53: Selection and erection of electrical equipment - Isolation, switching and control
IEC 61643- 11:2011	Low-voltage surge protective devices - Part 11: Surge protective devices connected to low-voltage power systems - Requirements and test methods
<b>Cables</b>	
IEC 60227/IS 694, IEC 60502/IS 1554 (Part 1 & 2)/IEC69947	General test and measuring method for PVC (Polyvinyl chloride) insulated cables (for working voltages up to and including 1100 V, and UV resistant for outdoor installation)
BS EN 50618	Electric cables for photovoltaic systems (BT(DE/NOT)258), mainly for DC Cables

**Earthing /Lightning:**

IEC 62561 Series (Chemical earthing)	IEC 62561-1 Lightning protection system components (LPSC) - Part 1: Requirements for connection components IEC 62561-2 Lightning protection system components (LPSC) - Part 2: Requirements for conductors and earth electrodes IEC 62561-7 Lightning protection system components (LPSC) - Part 7: Requirements for earthing enhancing compounds
<b>Junction Boxes</b>	
IEC 60529	Junction boxes and solar panel terminal boxes shall be of the thermo-plastic type with IP 65 protection for outdoor use, and IP 54 protection for indoor use
<b>Energy Meter</b>	
IS 16444 or as specified by the DISCOMs	A.C. Static direct connected watt-hour Smart Meter Class 1 and 2 – Specification (with Import & Export/Net energy measurements)
<b>Solar PV Roof Mounting</b>	<b>Structure</b>
IS 2062/IS 4759	Material for the structure mounting

**Note:-**

- Equivalent standards may be used for different system components of the plants. In case of clarification following person/agencies may be contacted.
- Ministry of New and Renewable Energy (Govt. of India) National Institute of Solar Energy
- The Energy & ResouVijaya Dairyes Institute TUV / Rheinland / UL

**Format-VII**

**PROJECT REPORT FORMAT**

**Format for Summary Project Report for  
Grid Connected Rooftop and Small SPV Power Plants**

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

Sl. no	Component	Specifications	Quantity	Make
A	Solar PV module			
A.1	Aggregate Solar PV capacity (kWp)			
B	Grid Tie inverter (Type and Capacity)			
B.1	Aggregate Inverter capacity (kVA)			
C	Module mounting structure (Certified by a Structural Engineer <b>(Mandatory for 101 kWp to 1000 kWp)</b> )			
D	Array Junction Box			
E	AC Distribution Board			
F	Cable (All type)			
G	Earthing Kit (maintenance free)			
H	Meters			
I	Online monitoring system			
J	Any other component			
K	Transformer			

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

**Format-VIII**

**BIDDER INFORMATION**

(In technical bid)

1	Name of the organization	
2	Year of establishment	
3	Complete postal address	
4	Name & Designation of Authorized person	
5	Phone No.'s	
6	Fax No.	
7	Email	
8	Nature of the firm (Proprietary/partnership/etc...)	
9	<b>Bank Details of the Agency:</b>	
	Bank Name	
	Bank Address	
	Bank Account Number	
	IFSC Code	
10	PAN No.	
11	TIN No.	
12	Service Tax Registration No.	
13	Total No. of branch offices in Telangana	
14	Bid Document Fee (Non refundable)	Amount Rs. : DD No. : DD Date : Issuing Bank & Branch :
15	EMD	Amount Rs. : DD/BG No. : DD/BG Date : Issuing Bank & Branch :
16	Details of certificates enclosed.	



**Forms**

Turn over details of item/product - **2017- 18 to 2019-20**

S.No	Solution	Amount (Rs in Lakhs)

**List of Major Customers -2017- 18 to 2019-20**

S. No	Customer Full Address	Details of Supplies made	Turn Over (Rs. In Lakhs)

**CHECK LIST**

**IMPORTANT:**

The Bidder must ensure that the following details in the check list are furnished along with the bid document. The bidder must also carefully go through all the contents of the BID Document and any additional information/documents, required more than the items listed in the check list below, also shall have to be furnished. Non-furnishing of any required information/document as per the Tender Document will lead to rejection of the bid. (in the following order only).

S.No	Particulars	Yes / No	Pg. No.	Name of the File uploaded
1	Tender Document Fee of Rs.29,500/- in the form of DD.			
2	EMD of Rs.9,00,000/-(DD/BG) drawn from any Nationalised/ Scheduled Bank			
3	Bidder Information Sheet			
4	Tender document, duly signed and stamped in token of accepted all the terms and conditions of the tender schedule.			
5	Registration Certificate (firm registration)			
6	Copy of PAN & GST			
7	Original Manufacturer Certificate			
8	<b>Valid Registration with TSREDCO</b>			
9	The bidder shall submit the Solvency certificates from Banks etc) of not less than Rs.5.00Cr for 1200KWp capacity.			
10	Solar PV Module Efficiency has to be greater than 15% @STC. (proof to be submitted)			
11	ISO Certificate			
12	The firms are having the solar GRID CONNECTED GROUND MOUNTED system experience of minimum 200kWp cumulative capacity of Solar PV of grid or grid connected rooftop systems in any one FY from last 3 FY.			
13	List of present clients with contact address & telephone numbers along with work orders & latest performance certificates of each capacity/ order			
14	Certificate to the effect the solar PV modules are indigenously manufactured in India			
15	Power of Attorney, wherever applicable			
16	<b>Original Consortium</b>			
17	Any other information/documents that are required in the bid document			

**NOTE: All pages of the bid documents must be serially numbered and signed.**



**SECTION - IX**

**DRAFT PPA**

**POWER PURCHASE AGREEMENT (PPA)**  
**FOR**  
**DESIGN, SUPPLY, INSTALLATION, TESTING AND**  
**COMMISSIONING OF 1200 KWP GRID CONNECTED**  
**GROUND MOUNTED POWER PLANT AT**  
**8 LOCATIONS OF EACH 150KWP UNDER RESCO**  
**MODE**  
**AT**  
**VIJAYA DAIRY, PLANTS OF TSDDCFL, TELANGANA**  
**BETWEEN**  
**(SELECTED BIDDER)**  
**(ADDRESS)**  
**AND**  
**TELANGANA VIJAYA DAIRY**  
**AND**  
**TELANGANA STATE RENEWABLE ENERGY**  
**DEVELOPMENT CORPORATION (TS REDCO)**



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## TABLE OF CONTENTS

<b>S.No.</b>	<b>Description</b>	<b>Page No.</b>
1	Definitions & Interpretation	
2	Effective Date	
3	Terms & Termination	
4	Construction, Installation, Testing and Commissioning of the System	
5	System Operations	
6	Delivery of Solar Power	
7	Tariff & Payment	
8	General Covenants	
9	Representations & Warranties	
10	Taxes and Governmental Fees	
11	Force Majeure	
12	Default	
13	Limitations of Liability	
14	Assignment	
15	Confidentiality	
16	Indemnity	
17	Miscellaneous	
18	SCHEDULE - I Description of Premises	
19	SCHEDULE - II Fees	
20	SCHEDULE - III Purchase Price	
21	SCHEDULE - IV Estimated Annual Production	
22	SCHEDULE - V Governmental Approvals	
23	SCHEDULE - VI Tender and Letter of Allocation & Sanction Letter from TSREDCO	
24	Annexure 1 –Power Producer Bank Details	

**This Power Purchase Agreement (PPA) is executed on .....at  
Hyderabad**

**BETWEEN**

**TELANGANA VIJAYA DAIRY  
REPRESENTED BY ITS MANAGING DIRECTOR,  
(Address)**

**(hereinafter referred to as “Purchaser”, which expression shall, unless the  
context otherwise specifies or requires, mean and include its representatives,  
administrators, successors and permitted assignees)**

**AND**

**M/S. (SELECTED BIDDER)  
REPRESENTED BY ITS DIRECTOR  
(Address)**

**(CIN: \_\_\_\_\_, GST NO: \_\_\_\_\_)**

**(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).**

**AND**

**TELANGANA STATE RENEWABLE ENERGY DEVELOPMENT  
CORPORATION LIMITED REPRESENTED BY ITS VICE CHAIRMAN AND  
MANAGING DIRECTOR,**

**D.No.6-2-910, THE INSTITUE OF ENGINEERS (INDIA),  
TELANGANA STATE CENTRE, 2<sup>nd</sup> FLOOR,  
VISVESVARAYA BHAWAN, KHAIRATHABAD,  
HYDERABAD, TELANGANA STATE -500 004.**

**(Hereinafter referred to as TSREDCO, which expression shall, unless the context  
otherwise specifies or requires, mean and include its successors and permitted  
assigns) of the Third Party.**

WHEREAS:

- A. The Power Producer has been notified as successful bidder by TSREDCO for "Design, Supply, Installation, Testing and commissioning of 1200 KWp Grid connected Ground Mounted power plant at 8No's locations of each 150KWp at **Vijaya diary plants of TSDDCFL, TELANGANA** under RESCO mode and as per competitive bidding conducted under RFS No. \_\_\_\_\_ dated \_\_\_\_\_.
- B. The Power Producer is engaged in the business of design, supply, erection, testing, commissioning, operating and maintenance power plants and supply of power there from, including grid connected rooftop power projects.
- C. The Power Producer has agreed to install and operate a solar photovoltaic power plant of 1200 KWp Grid connected Ground Mounted power plant at 8No's locations of each 150KWp at **Vijaya diary plants of TSDDCFL, TELANGANA** 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. M/s. (SELECTED BIDDER) ( " Special purpose vehicle" or " SPV"), in accordance with the terms of RFS clause No. \_\_\_\_\_. and as intimated to TSREDCO through letter of M/s (SELECTED BIDDER) dt: \_\_\_\_\_ as Developer entity / SPV which shall undertake and perform the obligations and exercise the rights of the selected bidder under the LOA/LOI, Including the obligation to enter into this Agreement pursuant to the LOA/LOI for executing the Project.
- E. 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 herein, including the schedules, amendments, modifications and supplements made in writing by the Parties from time to time.
- (d) "Applicable Law" means, with respect to any Person, any constitutional provision, law, statute, rule, regulation, ordinance, treaty, order, decree, judgment, decision, certificate, holding, injunction, registration, license, franchise, permit, authorization, guideline, Governmental Approval, consent or requirement or any Governmental Authority in India having jurisdiction over such Person or its property, enforceable by law or in equity, including the interpretation and administration thereof by such Governmental Authority.
- (e) "Assignment" has the meaning set forth in Section 14.1:
- (f) "Business Day" means any day other than Sunday or any other day on



which banks in Telangana are required or authorized by Applicable Law to be closed for business:

- (g) "Commercial Operation Date" shall mean synchronization date given by TS DISCOM
- (h) "Consents, Clearances and Permits" shall mean all authorization, licenses, approvals, registrations, permits, waivers, privileges, acknowledgements, agreements or concessions required to be obtained From or provided by any concerned authority for the purpose of setting up of the generation facilities and / or supply of power:
- (i) "Deemed Generation" shall mean per day average generation of active days in that particular month (or) inverter reading whichever is less.
- (j) "Delivery Point" shall be the single point, at a location mutually agreed by the Parties, in line with applicable regulation/ rules where Solar Power is delivered by the Power Producer from the System to the Purchaser.
- (k) "Define Resolution" has the meaning set forth in Section 17.7 (b);
- (l) "Disruption Period" has the meaning set forth in Section 5.3 (c)
- (m) "Distribution Utility" means the local electric distribution owner and operator providing electric distribution and interconnection services to Purchaser at the Premises;
- (n) "Due Date" shall mean 14 days from the date of submission of invoice to purchaser.
- (o) "Effective Date" has the meaning set forth in Section 2;
- (p) "Estimated Remaining Payments" means as of any date, the estimated

Remaining Solar Power Payments to be made through the end of the applicable Term, as reasonably determined by the Power Producer in accordance with Section 7.1;

- (q) "Expiration Date" means the date on which the Agreement terminates by reason of expiration of the Term.
- (r) "Force Majeure Event" has the meaning set forth in Section 11.1
- (s) "Governmental Approval" means any approval, consent, franchise, permit, certificate, resolution, concession, license or authorization issued by or on behalf of any applicable Governmental Authority for the purpose of setting up of the Project and / or for sale and purchase of Solar Power of the Project pursuant to the Agreement.
- (t) "Governmental Authority" means any central, state, regional, district, town, city or municipal government, whether domestic or foreign, or any department, agency, bureau, or other administrative, regulatory or judicial body of any such government.
- (u) "Indemnified Persons" means the Purchaser Indemnified Parties or the Power Producer-indemnified Parties, as the context requires.
- (v) "Insolvency Event" means with respect to a Party, that either
  - 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.
- (w) "Installation Work" means the construction and installation of the System and the Start-up, testing and acceptance (but not the operation and maintenance) thereof; all performed by or for the Power Producer at the Premises.
  - (x) "Invoice Date has the meaning set forth in Section 7.3.
  - (y) "Losses" means all losses, liabilities, claims, demands, suits, causes of action, judgments, awards, damages, cleanup and remedial obligations, interest, fines, fees, penalties, costs and expenses (including all attorneys' fees and other costs and expenses incurred in defending any such claims or other matters or in asserting or enforcing and indemnity' obligation)
  - (z) "Main Metering System" means all meter(s) and metering devices owned by the Power Producer and installed at the Delivery point for measuring and recording 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 adjusted 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 Indemnity" has the meaning set forth in Section 16
- (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 16.2
- (ll) "Representative" has the meaning set forth in Section 8.2.
- (mm) "Scheduled Complete Date" has the meaning set forth in Section 4.1(h)
- (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, 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"), of the last site of the premises 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 occurring 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 section, 17.7 (c)

(c) The Purchaser warrants that the roof top or the space provided for the installation of the solar power system is free from any liens or encumbrances. The purchase would not at any point of time encumber the rooftop space without the consent of the Solar Power Producer or his lender.

(d) Any term not defined in the PPA , will have the same meaning as defined in the Tender Document and vice versa, in case any differences occurs PPA Definition will prevail over the Tender Document definition.

#### **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 TSREDCO. The Power Producer shall provide to the Purchaser AND TSREDCO 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 1000 KWp.
- 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 or such other mutually agreed point in the electrical system of the Purchaser such as the nearest termination point as per site conditions

- e) The installation of additional equipment or upgrading of existing facilities as per the statutory requirements or requirements of state utilities shall be the responsibility of Power Producer.
- f) Unless otherwise agreed between the Parties, the Power Producer shall not do (a) Chipping of rooftop; or (b) disturbing the water proofing of roof;(c) Carry out any other modification of the Premises without the written consent of the Purchaser.
- g) 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.
- h) The Power Producer shall, within fifteen (15) working days of the date of handing over of each premises, submit to the Purchaser Layout drawings of the Project for approval ("Layout 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 Layout Drawings, he shall communicate the same to Power Producer within a period of ten (10) working days of the date of submission of the Layout 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.

- i) 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 section 11 and 12.2 (Force Majeure or Purchaser Default), the Power Producer or its contractor shall pay to TSREDCO liquidated damages plus applicable GST, for the delay in such commencement of supply of Solar Power. The liquidated damages shall be computed to be equal to the extra cost incurred by Purchaser for paying the energy charges to the Distribution licensee in the premises compared to the solar tariff agreed in this Agreement, for the duration of the delay limited upto 3 months and to the extent of average agreed guaranteed generation for the period of delay for the capacity agreed at the premises site wise, where delayed installation has happened. Consequential damages and loss of profit , other than the above , will not form the ground for claiming Liquidated damages.
- j) The Purchaser shall ensure that all arrangements and infrastructure for receiving Solar Power beyond the Delivery Point are ready on or prior to the Commercial Operation Date and is maintained in such state in accordance with applicable laws through the Term of the Agreement.
- k) Power Producer shall fulfil 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 and TSREDCO's designated representative.

## **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.

### **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 deemed to consider 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, if any, shall be tested, maintained and owned by the Power Producer. In case of malfunctioning of main metering system at delivery point, deemed generation shall be paid upto 4 working days only, and after that no payment shall be made till meter is replaced by new one only.
- (d) The Power Producer shall connect the Solar output to the existing system of the Purchaser as per the requirements and guidelines of the TS DISCOMs.
- (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.

### **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. For the first year, the generation of a particular month (in which the deemed generation needs to be calculated) will be used for calculating the average, 2nd year onwards, the generation data of the previous year, corresponding month will be referred. ("Deemed Generation"), Power producer shall inform about the 'disruption or outage in System production, for reasons attributable to purchaser in 'writing within 3 days of occurrence with the date and time of such occurrences and Purchaser's liability shall start from the time of occurrence 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) Grid failure from TS DISCOM.
- b) Power Outage - No reference voltage available for synchronization.
- c) 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.

## **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.

## **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 Tariff will be levelized tariff as per TSREDCO allocations.

i).	1200kWp	Rs. ____ (rate as quoted by selected bidder)
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The 'year' Considered shall be the financial year which April 1st to 31st March of every year as per TSREDCO Schedule II provides a detailed year on year tariff schedule.

7.2 a) TS-REDCO as one of the parties to this agreement has got to be properly described as FACILITATOR similar to TELANGANA VIJAYA DIARY being described as Purchaser and (Selected Bidder) described as the Power Producer.

b) As Facilitator the role of TS-REDCO as follows:

- i. Ensuring timely implementation/grounding of the solar power plants at the various locations as per the requirements of the Power Purchaser.
- ii. Ensuring obtainment of subsidy towards the cost of the Plant & Equipments of the Power Producer.
- iii. Ensuring that the Power Producer does timely trouble shooting to ensure proper working/functioning of the solar power producing units and ensure optimum power supply to the power purchaser.
- iv. Play a prominent role in the meter reading and billings against the power supplied to the Power Purchaser.
- v. Ensuring that any other requirements of both the Power Purchaser and Power Producer as per the PPA are correctly addressed.

d) The Power Producer shall share the part of revenue received by them, on sale of solar power to the Purchaser, equivalent to 20 paisa per unit to TSREDCO towards facilitation commission charges plus applicable GST. The TSREDCO facilitation commission charges are non-refundable and the facilitation commission charges have to be paid on monthly basis based on the metered power units.

### **7.3 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. The invoice and other relevant documents to be enclosed to the invoice shall be authenticated and validated by TSREDCO before submitted to the Power Purchaser for payment.

**7.4** 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.

### **7.5 Time of payment**

Purchaser shall pay all amounts due hereunder within 15 days after the date of the receipt of the invoice via email or post ("**Due Date**").

### **7.6 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 ESCROW account.

The TSREDCO and the selected Bidder is required to open and maintain separately an Escrow account with an Escrow Agent in terms of the Escrow Agreement (Draft Escrow Agreement is part of the Tender Document).

The Parties (other than the Escrow Agent) will ensure that deposits shall be made in the Escrow Account in the mode and manner as per the Power Purchase Agreement proposed to be entered by the TSREDCO and the selected Bidder with the Power Purchaser.

Funds lying to the credit of the Escrow Account shall be released/transferred from the Escrow Account on the basis of written instructions by the TSREDCO to the selected Bidder (Power Producer) and to the TSREDCO as and when due



as per the Power Purchase Agreement proposed to be entered by the TSREDCO and the selected Bidder with the Power Purchaser.

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.

#### **7.7 Late Payment Surcharge**

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.

#### **7.8 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.

## **7.9 Change in Law:**

- (a) For the Purpose of this section 7.9, 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.
- (i) 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
  - (ii) 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
  - (iii) The imposition of a requirement, for obtaining any Government Approvals which was not required earlier; or
  - (iv) 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
  - (v) 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.
  - (vi) 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
  - (i) 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,
  - (ii) 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 Approvals required to be obtained and maintained and secured by the Power Producer and to enable the Power Producer to perform such obligations

- (d) 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.
- (e) 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 its representatives and contractors 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.
- (f) 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.
- (g) 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.
- (h) **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.

- (i) **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.
- (j) **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.
- (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 DISCOMs.
- (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 7.7. 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 warrant 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 Purchaser's overall income or revenues.

## **11 Force Majeure**

### **11.1 Definition**

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

**11.2 Excused Performance:** Except as otherwise specifically provided in the Agreement, neither Party shall be considered in breach of the Agreement or liable for any delay or failure to comply with the Agreement, if and to the extent that such delay or failure is attributable to the occurrence of a Force Majeure Event; provided that the Party claiming relief under this Section 11 shall immediately (i) notify the other Party in writing of the existence of the Force Majeure Event, (ii) exercise all reasonable efforts necessary to minimize

delay caused by such Force Majeure Event, (iii) notify the other Party in writing of the cessation or termination of said Force Majeure Event and (iv) provided, however, that Purchaser shall not be excused from making any payments and paying any unpaid amounts due in respect of Solar Power delivered to Purchaser prior to the Force Majeure Event performance interruption.

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

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

## **12 Default**

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

- (a) Power Producer Defaults: The following events shall be defaults with respect to the Power Producer (each, a "**Power Producer Default**").
  - (i) An Insolvency Event shall have occurred with respect to the Power Producer;
  - (ii) Failure to achieve Commissioning of the System within the period as per EOI document; or such extended period with the application of Liquidated damages as the case may be and
  - (iii) The Power Producer breaches any material term of the Agreement and, 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; 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
  - (ii) 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 indemnity, 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 rowel 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 Hyderabad 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. The procedure as mentioned in PWD Works Manual prevalent at the time of such dispute is to be followed to carry out the said conciliation.

### **(c) Arbitration Procedure:**

(i) In case of any dispute arising out of this Agreement or otherwise, between the parties hereto, PWD manual dispute resolution methodology will be used. A period of not more than 15 days will be allotted at each stage of resolution. Upon failure to resolve the said dispute through conciliation the dispute shall be referred to arbitration and the V.C & Managing Director, TSREDCO, may appoint an arbitrator. The arbitrator(s) shall be appointed within a period of 30 days from the date of receipt of written notice / demand of appointment of arbitrator from either Party. The cost of the arbitration will be shared equally by Power Producer and the Purchaser.

- (ii) The venue of such arbitration shall be Head Office of TSREDCO. The language of the arbitration proceedings shall be in English. The arbitral award shall be binding on both Parties. The arbitration proceedings shall be governed by the Indian Arbitration and Conciliation Act, 1996, as amended from time to time including provisions in force at the time the reference is made.
- (d) During the dispute resolution period, both the Parties shall continue to perform their respective obligations as per provisions of the Agreement.
- (e) This Section 17 is severable from the rest of this Agreement and shall remain in effect even if this Agreement is terminated for any reason.

### **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 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, Facilitator and Purchaser.

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

FOR & ON BEHALF OF		FOR & ON BEHALF OF	
POWER PURCHASER		POWER PRODUCER	
Signature:		Signature:	
Name:		Name:	
Designation:		Designation:	

FOR & ON BEHALF OF	
FACILITATOR	
Signature:	
Name:	
Designation:	

WITNESSES		WITNESSES	
1)	Signature:	1)	Signature:
	Name:		Name:
	Designation:		Designation:

WITNESSES		WITNESSES	
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	___ sqmtr (PV System)
Number of Building	___
Roofs	
Capacity	_____
Distribution	

## SCHEDULE II

### FEES

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

Purchaser shall pay power producer for solar power at the rate equal to INR

**1200 Kwp            Rs. \_\_\_/- per Unit (rate as quoted by Selected Bidder)**

which is the levelized tariff as per Telangana Vijaya Diary allocation for a period of 25 Years .

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



### **SCHEDULE III**

The following is the purchase value of the system over a period of 25 years.

This may be applicable under the following conditions.

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

The Purchase Price for the systems are as follows:

**1200Kwp      Rs. 36/- per Wp**

<b>Year</b>	<b>Salvage Value (Rs. )</b>
<b>1<sup>st</sup> Year</b>	<b>100%</b>
<b>2<sup>nd</sup> Year</b>	<b>96%</b>
<b>3<sup>rd</sup> Year</b>	<b>92%</b>
<b>4<sup>th</sup> Year</b>	<b>88%</b>
<b>5<sup>th</sup> Year</b>	<b>84%</b>
<b>6<sup>th</sup> year</b>	<b>80%</b>
<b>7<sup>th</sup> year</b>	<b>76%</b>
<b>8<sup>th</sup> year</b>	<b>72%</b>
<b>9<sup>th</sup> year</b>	<b>68%</b>
<b>10<sup>th</sup> year</b>	<b>64%</b>
<b>11<sup>th</sup> year</b>	<b>60%</b>
<b>12<sup>th</sup> year</b>	<b>56%</b>
<b>13<sup>th</sup> year</b>	<b>52%</b>
<b>14<sup>th</sup> year</b>	<b>48%</b>
<b>15<sup>th</sup> year</b>	<b>44%</b>
<b>16<sup>th</sup> year</b>	<b>40%</b>
<b>17<sup>th</sup> year</b>	<b>36%</b>
<b>18<sup>th</sup> year</b>	<b>32%</b>
<b>19<sup>th</sup> year</b>	<b>28%</b>
<b>20<sup>th</sup> year</b>	<b>24%</b>
<b>21<sup>st</sup> Year</b>	<b>20%</b>
<b>22<sup>nd</sup> Year</b>	<b>16%</b>
<b>23<sup>rd</sup> Year</b>	<b>12%</b>
<b>24<sup>th</sup> Year</b>	<b>8%</b>
<b>25<sup>th</sup> Year</b>	<b>4%</b>

**SCHEDULE IV**  
**ESTIMATED SOLAR POWER GENERATION**

Client :  
Project :  
Location :

End of Year	Yearly Degradation 'MWh'(Modules & System) – Degradation consider in PV Syst generation data	Global incident in coll. Plane(GlobInc) 'kWh/Sq.mtr' Yearly	Energy injected into grid (E_Grid) 'MWh' Yearly 'A'
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.

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**SCHEDULE VI**

TENDER AND LETTER OF ALLOCATION &  
SANCTION LETTER FROM TSREDCO

ANNEXURE - I

POWER PRODUCER 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	



## SECTION - X

# DRAFT ESCROW AGREEMENT

## **ESCROW AGREEMENT**

This Escrow Agreement is made and entered into on this \_\_\_\_ day of \_\_\_\_ 2020 at Hyderabad, State of Telangana.

### **BETWEEN**

**Telangana State Renewable Energy Development Corporation Limited**, represented by The Vice Chairman & Managing Director having its registered office at D. No. 6-2-910, Visvesvaraya Bhavan, The Institution of Engineers Building, Khairatabad, Hyderabad, 500 004 (hereinafter referred to as the "TSREDCO", which expression shall, unless it be repugnant to the subject or context thereof shall mean and include its successors and assigns) of the **FIRST PARTY**;

### **AND**

**M/s. (Selected Bidder) (Power Producer)**, a company incorporated under the Companies Act, having its registered office at \_\_\_\_\_. (Hereinafter referred to as "Power Producer", represented by the Managing Director which expression shall, unless it be repugnant to the meaning or context thereof, be deemed to include its successors and assignees) of the **SECOND PARTY**.

### **AND**

\_\_\_\_\_**(Bank)**, a company incorporated under the laws of India and having its registered office at \_\_\_\_\_ (hereinafter referred to as the "BANK NAME / Escrow Agent" which expression shall, unless it be repugnant to the context or meaning thereof, include its successors and permitted assigns);

The First Party, the Second Party and the Escrow Agent are, wherever the context so admits, hereinafter are individually referred to as the "Party" and collectively as "Parties".

**WHEREAS:**

A. **M/s. Telangana Vijaya Diary (Power Purchaser)** has agreed to purchase the entire Solar Power of the Project on “Take or Pay basis” as per the terms and conditions contained in the Power Purchase Agreement entered by the FIRST PARTY and SECOND PARTY on the \_\_\_day\_\_\_ of 2020 under Tender No.

\_\_\_\_\_.

B. **TSREDCO(FIRST PARTY)** is a Government Company owned by Government of Telangana, acting as nodal agency for the schemes and policies of Central and State Governments relevant to the Renewable Energy Sector in the state of Telangana.

C. The **SECOND PARTY** is in the business of setting up Power Projects in the Renewable Energy Sector and trading of power produced by them to the parties on pre agreed terms and conditions.

D. The First Party and Second Party is required to open and maintain separately an escrow account (as defined herein after) with an escrow agent in terms of the Agreement.

E. The First Party and the Second Party have approached BANK NAME to act as an escrow agent and BANK NAME has agreed to act as the escrow agent under this Escrow Agreement; and

F. Accordingly, the Parties are desirous of executing this Escrow Agreement to set out the manner and procedure for operation of the escrow account and other matters in connection therewith.



NOW THEREFORE, in consideration of the premises, the mutual covenants, terms and conditions and understandings set forth herein, the Parties with the intent to be legally bound hereby covenant and agree as follows:

## **1. DEFINITIONS AND INTERPRETATION**

### **1.1 In this Agreement, unless the context otherwise requires:**

a. "Applicable Law" means to the extent applicable to a Party, any applicable statute, law, regulation, ordinance, rule, judgment, rule of law, order, decree, clearance, approval, directive, guideline, policy, requirement, or other governmental restriction or any similar form of decision, or determination by, or any interpretation or administration of any of the foregoing by any governmental authority in effect, as amended from time to time.

b. 'Business Day' shall mean any day (other than a Saturday or a Sunday or a bank holiday) on which banks are open for business during banking business hours in Hyderabad;

c. 'Escrow Account' shall mean the non-interest bearing current account in the name and style of " \_\_\_\_\_ " opened and maintained with the Escrow Agent and operated in terms of this Escrow Agreement.

d. "Escrow Agreement" shall mean this escrow agreement, together with the Schedules hereto, as may be amended, modified or supplemented from time to time, in accordance with its terms.

All capitalized terms, unless specifically defined in this Escrow Agreement shall have the meanings ascribed to them respectively in the Agreement.

### **1.2 Interpretation**

1.2 In this Escrow Agreement, unless the context requires otherwise:

1.2.1 Reference to a clause or schedule is a reference to a clause of, or schedule to, this Agreement.

1.2.2 Words and expressions in the singular include the plural and vice versa.

1.2.3 References to documents shall be construed as references to such documents as may be amended from time to time.

1.2.4 References to times and dates in this Escrow Agreement are references to times and dates in India.

1.2.5 Any date or period as set out in any clause of this Escrow Agreement may be extended with the written consent of the Parties, failing which, time shall be of the essence.

1.2.6 The Schedules form an integral and operative part of this Escrow Agreement and references to this Escrow Agreement shall include references to the Schedules.

## **2. APPOINTMENT OF THE ESCROW AGENT AND ESTABLISHMENT OF THE ESCROW ACCOUNT**

- a) Each of the Parties hereby acknowledges that the Escrow Agent has been appointed under this Escrow Agreement and that it shall discharge its functions in accordance with the terms of this Escrow Agreement. The First Party and the Second Party agree to execute all documents and provide further information forms, writings and documents as may be required by the Escrow Agent with respect to the Escrow Account. The Escrow Agent hereby accepts the escrow hereby declared and provided upon the terms and conditions set forth in this Escrow Agreement.
- b) That the Parties herein agreed that the bank shall conduct itself in the transfer of funds from the Escrow Account, in the manner for the purpose set forth herein, as per the instructions of the FIRST PARTY("TSREDCO").
- c) The SECOND PARTY agrees that Escrow Agent shall be entitled to dishonor any instrument drawn on the Escrow Account by the Second party and for any such dishonor neither the Escrow agent nor the First Party(TSREDCO) shall be held responsible and for this purpose it is understood by and between the parties that:

- i. No cheque book to be issued at escrow a/c.
- ii. No signatures linked to escrow a/c.
- iii. List of Authorized Signatories of all the parties shall be provided.

### **3. DEPOSITS IN THE ESCROW ACCOUNT**

The Parties (other than the Escrow Agent) shall ensure that deposits shall be made in the Escrow Account in the mode and manner as per the Power Purchase Agreement entered by the FIRST PARTY and SECOND PARTY on the \_\_\_day\_\_\_ of 2020 with **Telangana Vijaya Diary (Power Purchaser)**. Cash deposits will not be accepted in the Escrow Account.

### **4. RELEASE/ TRANSFER OF FUNDS FROM THE ESCROW ACCOUNT**

a) Funds lying to the credit of the Escrow Account shall be released/transferred from the Escrow Account on the basis of written instructions by the First party (TSREDCO) to the Second party and to the self (TSREDCO) as and when due as per the Power Purchase Agreement entered by the FIRST PARTY and SECOND PARTY on the \_\_\_day\_\_\_ of 2020 **Telangana Vijaya Diary (Power Purchaser)** under Tender No. \_\_\_\_\_ . The instructions will be signed by the Authorized Signatory of the First party (TSREDCO) and will be submitted to Escrow Agent.

b) All such transfers as mentioned ABOVE shall be modified at the sole written instruction of authorized personnel of TSREDCO to \_\_\_\_\_(Bank), which shall be duly signed by the authorized signatories, whose specimen signatures are appended as per the schedule annexed herewith.

### **5. INSTRUCTIONS AND COMMUNICATIONS**

5.1 The details of the authorized signatories (along with their specimen signatures) of each of the First Party and the Second Party, with respect to any notice, certificate, instrument, demand, request, direction, instruction, waiver,

receipt, consent or other document or communication required or permitted to be furnished to the Escrow Agent as agreed under this Agreement, are as set forth in Schedule III hereto. The First Party and the Second Party shall furnish the relevant Board Resolution to the Escrow Agent authorizing the signatories as set forth in Schedule III for signing the Escrow Agreement and/or issuing instructions on behalf of the concerned Parties. Any revision in the authorized signatory list has to be supported by a revised Board Resolution which must be furnished to the Escrow Agent.

5.2 The Escrow Agent shall also from time to time be entitled to call for further information and / or documents necessary for the operation of the Escrow Account including but not limited to processing of transfer requests received from the other Parties to this Escrow Agreement and / or pertaining to the inflow or the outflow of the funds from the Escrow Account and/or as per the legal and/or regulatory requirements. The Escrow Agent shall not be obliged to make any transfers from the Escrow Account if the other Parties to this Escrow Agreement fail to furnish the necessary documents and / or information as sought by the Escrow Agent.

5.3 In the event any instructions are given, whether in writing, by facsimile or otherwise, the Escrow Agent is authorized to seek confirmation of such instructions by sending an e-mail to the person or persons designated, as set forth in Schedule III hereto.

5.4 Without prejudice to the other provisions of this Escrow Agreement, the Escrow Agent shall not be obliged to make any payment or otherwise to act on any request or instruction notified to it under this Escrow Agreement if:

- i. any facsimile or any other instructions (in original or otherwise) are illegible, unclear, incomplete, garbled or self-contradictory; or
- ii. it is unable to verify any signature on the communication against the specimen signature provided for the relevant authorized signatory by the concerned Party.

In the event that the Escrow Agent receives an instruction from the Parties and is thereafter unable to act on such instructions due to the causes mentioned in this

clause, the Escrow Agent shall seek clarification from the concerned Party and shall act upon such instructions only when all ambiguities have been successfully removed to its satisfaction.

## **6. BANK ESCROW SERVICE CHARGES AND EXPENSES**

6.1 \_\_\_\_\_ shall pay, on demand, all the usual and customary service charges, transfer fees, account maintenance, account acceptance, statement, investigation, funds transfer and any other charges as are levied by the Escrow Agent as mutually agreed and such other out of pocket expenses as are claimed by the Escrow Agent (collectively, the "charges") in connection with the Escrow Account. In addition \_\_\_\_\_ has agreed to pay one-time bank escrow service charges of Rs.\_\_\_\_\_/ - plus applicable GST, and Rs.\_\_\_\_\_/ - as annual maintenance charges. \_\_\_\_\_ shall deposit the one- time bank escrow service charges in to the Escrow Account within three Business Days of the opening of the Escrow Account and/ or shall deposit the charges from time to time within three Business Days of such demand by the Escrow Agent. In the event \_\_\_\_\_ fails to make the timely payment to the Escrow Agent of the one-time bank escrow service charges and/or the charges, the Escrow Agent shall have the right to withdraw such amounts from the Escrow Account as is necessary for the payment of the one-time bank escrow service charges and charges, in which case \_\_\_\_\_ shall replenish the Escrow Account with such amounts equivalent to the amounts withdrawn by the Escrow Agent within two (2) Business Days of such withdrawal. For the purpose of this clause and notwithstanding anything contained herein, the Parties agree that the Escrow Agent shall have the right to claim or exercise any lien, set-off, counter-claim or other right in respect of the amounts lying in the Escrow Account for recovering the one-time bank escrow service charges and charges. The Parties agree that in case the Escrow Agent is required to make any payments such as stamp duty, stamp duty penalties, fines and/or any other charges and duties on and in relation to this Escrow Agreement and any other related documents, whether at the time of execution or thereafter then the Escrow Agent shall be entitled to recover the same from the Escrow Account.

## **7. ESCROW AGENT'S DUTIES AND LIABILITIES**

7.1 The Escrow Agent shall have only those duties, obligations and responsibilities expressly specified in this Escrow Agreement and shall have no duties, obligations or responsibilities which are implied or inferred by law or otherwise.

7.2 The duties of the Escrow Agent under this Escrow Agreement are purely ministerial, administrative and non-discretionary in nature. Neither Escrow Agent nor any of its directors, officers, agents and employees shall, by reason of anything contained in this Escrow Agreement, be deemed to be a trustee for or have any fiduciary relationship with the First Party, the Second Party, or any other person. Where the Escrow Agent has acted in accordance with this Escrow Agreement, it shall be deemed to have acted as if instructed to do so by the First Party and/or the Second Party.

7.3 The Escrow Agent shall not be required to expend or risk any of its own funds or otherwise incur any liability, financial or otherwise, in the performance of any of its duties under this Escrow Agreement.

7.4 The Escrow Agent shall not be precluded by virtue of this Escrow Agreement (and neither shall any of its directors, officers, agents and employees or any company or persons in any other way associated with it be precluded) from entering into or being otherwise interested in any banking, commercial, financial or business contacts or in any other transactions or arrangements with the First Party or the Second Party or any of their affiliates provided such transactions or arrangements are not contrary to the provisions of this Escrow Agreement.

7.5 The Escrow Agent shall not be bound or affected, in its capacity as Escrow Agent, in any way by the Agreement or any agreement or contract between the First Party, the Second Party, or any other person, to which the Escrow Agent is not a party. The Escrow Agent, in its capacity as an escrow agent, is deemed not to have any knowledge of any provision of the Agreement or any other document unless the substance of such provisions is explicitly set forth in this Escrow

Agreement. The Escrow Agent shall not in any way be required to determine whether or not the terms and conditions of the Agreement or any other agreement or contract between the First Party and the Second Party to which the Escrow Agent is not a party have been complied with. Furthermore, the Escrow Agent is deemed not to have any knowledge or notice of any fact or circumstance not specifically set forth in this Escrow Agreement.

The Escrow Agent is not required to withhold any amount from or in respect of the transactions contemplated herein, pursuant to any law, including, without limitation, any requirement of withholding tax. However, in the event of any governmental authorities/investigating agency/enforcement agency issue any direction/order to the Escrow Agent to withhold, any amount lying in the Escrow Account or direct/order to act as per the direction/order of such authorities, the Escrow Agent shall comply with such order/direction with prior written intimation to the Parties.

7.6 The Escrow Agent may, in good faith, accept and rely on any notice, instruction or other document received by it under this Escrow Agreement as conclusive evidence of the facts and of the validity of the instructions stated in it and as having been duly authorized, executed and delivered and need not make any further enquiry in relation to it. The Escrow Agent may act in conclusive reliance upon any instrument or signature believed by it, acting reasonably, to be genuine and may assume, acting reasonably, that any person purporting to give receipt, instruction or advice, make any statement, or execute any document in connection with the provisions of this Escrow Agreement has been duly authorized to do so. The Escrow Agent shall be under no duty to inquire into or investigate the validity, accuracy or content of any such document.

7.7 The Escrow Agent shall not be liable to any person for any losses arising out of or in connection with the performance or non-performance of its obligations under this Escrow Agreement, except to the extent directly resulting from the willful default or gross negligence of the Escrow Agent.

7.8 The Escrow Agent may execute any of its powers and perform any of its duties under this Escrow Agreement directly or through appointed agents or attorneys.

7.9 'Force Majeure Event' means any event (including but not limited to an act of God, fire, epidemics, natural calamities; riots, civil commotion or unrest, terrorism, war, strikes or lockouts; expropriation or other governmental actions; any changes in applicable law or regulation including changes in market rules, currency restrictions, devaluations or fluctuations; market conditions affecting the execution or settlement of transactions or the value of assets; and breakdown, failure or malfunction of any telecommunication and information technology systems beyond the control of any Party which restricts or prohibits the performance of the obligations of such Party contemplated by this Agreement.

The Escrow Agent shall not be held liable for any loss or damage or failure to perform its obligations hereunder, or for any delay in complying with any duty or obligation, under or pursuant to this Agreement arising as a direct or indirect result of any Force Majeure Event.

7.10 The Escrow Agent may at its cost, consult with, and obtain advice from its lawyers or professional advisers over any question in relation to, and its duties under this Escrow Agreement. The Escrow Agent shall not incur any liability for taking any action or omitting any action in accordance with such advice.

7.11 The Escrow Agent does not have any proprietary or other interest in the Escrow Account, but is to serve as escrow holder only and having only possession thereof.

7.12 The Escrow Agent shall not be liable or responsible for obtaining any regulatory or governmental or other approval in connection with or in relation to the transactions contemplated herein and shall not be in any manner obliged to inquire or consider whether any regulatory or governmental approvals have been obtained.

7.13 The Escrow Agent shall not be obliged to supervise, control or perform any acts or responsibilities of the First Party or the Second Party or any other third party.



7.14 Any act to be done by the Escrow Agent shall be done only on a Business Day, during banking business hours, at Hyderabad, Telangana, India and in the event that any day on which the Escrow Agent is required to do an act, under the terms of this Escrow Agreement, is a day on which banking business is not, or cannot for any reason be conducted, then the Escrow Agent shall do those acts on the next succeeding Business Day.

7.15 In the event of any dispute or conflicting claims between the First Party or the Second Party, the Escrow Agent shall be entitled, in its sole discretion, to refuse to comply with any and all claims, demands or instructions with respect to such property held in escrow so long as such dispute or conflict shall continue, and the Escrow Agent shall not be or become liable in any way to the First Party or the Second Party or any other person or entity for failure or refusal to comply with such disputed or conflicting claims, demands or instructions. The Escrow Agent shall be entitled to refuse to act until, either (i) such conflicting or disputed claims or demands shall have been determined by a final order, judgment or decree of a court of competent jurisdiction, which order, judgment or decree is not subject to appeal, or settled by agreement between the conflicting parties as evidenced in writing that is satisfactory to the Escrow Agent or (ii) the Escrow Agent shall have received security or indemnity sufficient to hold it harmless from and against any and all losses which it may incur by reason of so acting. Any court order, judgment or decree shall be accompanied by a legal opinion by counsel for the presenting party, satisfactory to the Escrow Agent, to the effect that said order, judgment or decree represents a final adjudication of the rights of the parties by a court of competent jurisdiction, and that the time for appeal from such order, judgment or decree has expired without an appeal having been filed with such court. The Escrow Agent shall act on such court order and legal opinions without further question.

7.16 The Escrow Agent is under no duty to ensure that funds withdrawn from the Escrow Account are actually applied for the purpose for which they were withdrawn; neither the Escrow Agent nor any of its officers, employees or agents shall be required to make any distribution to the extent that the Escrow Amount is insufficient and shall incur no liability whatsoever from any non-distribution in such circumstances.

7.17 The Parties agree that the Escrow Agent shall not be, in any way, responsible or liable to the other Parties or any third person whatsoever, for deduction or withholding of any taxes in relation to the transaction for which the Escrow Account has been established pursuant hereto and the First Party and the Second Party acknowledge and confirm that they shall be solely and absolutely liable for any and all deductions or withholdings and payments of taxes, levies, cesses and all other statutory dues in relation thereto. The Parties (other than the Escrow Agent) confirm that they shall be, jointly and severally, liable for payment of all stamp duties payable in relation to this Agreement as well as any other instruments executed pursuant hereto and the Escrow Agent shall not be responsible or liable for the same, under any circumstances.

7.18 The Parties agree that Escrow Agent is acting in its capacity as an escrow agent only and shall not be deemed to act as an investment, legal or tax adviser to the Parties in the performance of its obligations under the Escrow Agreement.

7.19 Notwithstanding what is stated herein, in no event shall the Escrow Agent be liable for incidental, indirect, special, punitive or consequential damages caused to the Parties.

## **8. INDEMNITY**

The First Party and the Second Party agree to indemnify the Escrow Agent and its directors, officers, agents and employees against all losses, damages, claims, liabilities, costs and expenses which they may respectively suffer or incur arising out of or in connection with this Escrow Agreement, or the opening or operation of the Escrow Account or relating to the exercise of any of the duties under this Escrow Agreement, except to the extent directly resulting from the willful default or gross negligence of the Escrow Agent. This clause shall survive the termination of this Escrow Agreement and/or the resignation of the Escrow Agent.

## **9. TERMINATION**

The First Party and the Second Party may terminate from this Escrow Agreement at any time by giving 35 (thirty five) days prior joint notice in writing to the Escrow Agent of such intention to terminate from this Agreement.

## **10. RESIGNATION:**

10.1 The Escrow Agent may resign from this Escrow Agreement at any time by giving 30 (thirty) days prior notice in writing to the First Party and the Second Party of such intention to resign from this Agreement. In such event, the First Party and the Second Party shall jointly appoint a successor escrow agent and intimate the factum of such appointment to the Escrow Agent within the said 30 days period. Upon appointment of the successor escrow agent by the First Party and the Second Party, the amounts lying in the Escrow Account shall be transferred by the Escrow Agent to the successor escrow agent. The Escrow Agent, upon such transfer, shall stand discharged / released from all its obligations under this Escrow Agreement.

10.2 Notwithstanding the above, in the event a successor escrow agent has not been appointed by the First Party and the Second Party within the aforesaid period of 30 days then the Escrow Agent shall be entitled to appoint a successor Escrow Agent on the terms and conditions similar to that of the terms contained in this Escrow Agreement and give written intimation of the same to the First Party and the Second Party. The First Party and the Second Party shall be bound to accept such successor escrow agent. The Escrow Agent shall thereafter transfer the amounts lying in the Escrow Account to such successor escrow agent and upon such transfer, shall stand fully discharged / released from all its obligations under this Escrow Agreement.

## **11. CONFLICTS**

11.1 In the event of any inconsistency or conflict between the provisions of this Escrow Agreement, and the Agreement, and any other agreement or contract between the First Party and the Second Party, this Escrow Agreement shall prevail.

## **12. NOTICES**

Each notice, demand or other communication to be given or made under this Escrow Agreement shall be in English and in writing and delivered or sent to the relevant Party at its address, e-mail id or facsimile number set out below (or such other address or facsimile number as the addressee has by 5 (five) days' prior written notice specified to the other Party). Any notice, demand or other communication so addressed to the relevant Party shall be deemed to have been delivered (a) if delivered in person or by courier, when proof of delivery is obtained by the delivering Party; (b) if sent by post, on the 5th (fifth) day following posting; and (c) if given or made by facsimile, upon dispatch and the receipt of a transmission report confirming dispatch. The initial address, e-mail id and facsimile for the Parties for the purposes of this Escrow Agreement are:

First Party: Telangana State Renewable Energy Development Corporation Limited

Address: D. No. 6-2-910, Visvesvaraya Bhavan, The Institution of Engineers Building, Khairatabad, Hyderabad - 500 004.

Attn:

Email:

Fax:

Second Party: M/s. (Selected Bidder) (Power Producer)

Address:

Attn:

Email:

Fax:

Escrow Agent: \_\_\_\_\_(Bank)

Address:

Attn:

Email:

Fax:

When the Escrow Agent acts on any notice, demand or other communication sent by facsimile, or other form of electronic or data transmission, the Escrow Agent, acting upon such instruction so received shall not be responsible or liable in the event such notice demand or other communication is not an authorized or authentic notice, demand or other communication of the First Party and/or the Second Party or is not in the form the First Party and/or the Second Party sent or intended to send (whether due to fraud, distortion or otherwise). The First Party and the Second Party shall indemnify the Escrow Agent against any loss, liability, claim or expense (including legal fees and expenses) it may incur with its acting in accordance with any such notice, demand or other communication.

### **13. GOVERNING LAW**

13.1 This Escrow Agreement shall be governed by and construed in accordance with the laws of India.

13.2 The Parties irrevocably submit to the non-exclusive jurisdiction of the courts of Hyderabad.

### **14. ASSIGNMENT**

Except as otherwise expressly provided in this Escrow Agreement, no Party shall assign, encumber, dispose of, grant any security interest over, hold on trust or otherwise transfer all or any of its rights under this Escrow Agreement or purport to transfer all or part of any obligation imposed on it under this Escrow Agreement without the prior written consent of the other Parties.

## **15. SEVERABILITY**

If one or more of the provisions of this Escrow Agreement shall for any reason be held to be invalid, illegal or unenforceable in any respect under Applicable Law, such invalidity, illegality or unenforceability shall not affect any other provisions of this Escrow Agreement, and this Escrow Agreement shall be construed as if such invalid, illegal or unenforceable provision had never been contained in this Escrow Agreement, and the remaining provisions of this Escrow Agreement shall be given full force and effect.

## **16. MISCELLANEOUS**

16.1 Any amendment, modification or waiver to this Escrow Agreement (other than any amendment to the identity, name, telephone number, service address or specimen signature of the Authorized Signatory in Schedule III) must be in writing and signed by all the Parties to this Escrow Agreement.

16.2 This Escrow Agreement shall inure to the benefits of, and be binding upon, all Parties to this Escrow Agreement and their respective successors, trustees, receivers and permitted assignees. This Escrow Agreement is for the sole and exclusive benefit of the Parties to this Escrow Agreement and nothing contained herein, express or implied, is intended to confer or shall be construed as conferring upon any other person any rights, remedies or any other type or types of benefits.

16.3 Each of the Escrow Agent, the First Party and the Second Party represents and warrants to each other Party hereto that:

16.3.1 This Escrow Agreement has been duly authorized, executed and delivered on its behalf and constitutes a legal, valid and binding obligation on it;

16.3.2 The execution, delivery and performance of this Escrow Agreement by it does not and will not violate any Applicable Laws or any of the provisions of its constitutional documents; and

16.3.3 All consents, licenses, approvals and authorizations of, and registrations, declarations and other filings with, any governmental authority required in connection with the execution, delivery and performance of this Escrow Agreement have been duly obtained and are in full force and effect.

16.4 This Escrow Agreement (including the Schedules thereto constitute the entire understanding of the Escrow Agent, the First Party and the Second Party in respect of the subject matter hereof, and supersede all prior negotiations, agreements and understandings, both written and oral, amongst the Escrow Agent, the First Party and the Second Party with respect to the subject matter hereof.

16.5 This Escrow Agreement shall be executed simultaneously in any number of counterparts, each of which will be deemed an original, but all of which will constitute one and the same instrument.

16.6 The Parties shall do or cause to be done such further acts, deeds, matters and things and execute such further documents and papers as may be reasonably required to give effect to the terms of this Escrow Agreement.

16.7 The rights, powers, privileges and remedies provided in this Escrow Agreement are cumulative and are not exclusive of any rights, powers, privileges or remedies provided by Applicable Law or otherwise;

16.8 No failure by a Party to take any action with respect to a breach of this Escrow Agreement or a default by any other Party shall constitute a waiver of the former Party's right to enforce any provision of this Escrow Agreement or to take action with respect to such breach or default or any subsequent breach or default. Waiver by any Party of any breach or failure to comply with any provision of this Escrow Agreement by a Party shall not be construed as, or constitute, a continuing waiver of such provision, or a waiver of any other breach of or failure to comply with any other provision of this Escrow Agreement, unless any such waiver has been consented to by the other Parties in writing.

IN WITNESS WHEREOF, the Parties hereto have executed this Escrow Agreement on the day and year first above written.

Signed and delivered for and on behalf of

\_\_\_\_\_  
TSREDCO through its Authorised

Signatory

\_\_\_\_\_

Name :

Title :

Signed and delivered for and on behalf of

\_\_\_\_\_

M/s. \_\_\_\_\_ (Power Producer) through its Authorised

Signatory

\_\_\_\_\_



Name :

Title :

SIGNED AND DELIVERED by the within named \_\_\_\_\_(Bank) by the hand of  
Mr./Ms \_\_\_\_\_, its Authorized Signatory

## SCHEDULE-I

### 1. First Party Details

Name of the Entity: Telangana State Renewable Energy Development Corporation Limited.

Nature of Entity:

Business of Entity:

Address: D. No. 6-2-910, Visvesvaraya Bhavan, The Institution of Engineers Building, Khairatabad, Hyderabad - 500 004

### 2. Second Party Details

Name of the Entity: M/s. \_\_\_\_\_ (Power Producer)

Nature of Entity:

Business of Entity:

Address:

3. Agreement Details:

Agreement Execution Date:

**Purpose of Agreement:** The Power Producer( M/s.\_\_\_\_\_ ) has been notified as successful bidder by TSREDCO for " Design, Supply, Installation, Testing and commissioning of 1200KWp Grid Connected Ground Mounted power plant at 8 locations of each 150KWp at Vijaya Dairy plants of TSDDCFL, Telangana under RESCO mode and as per Technical Specification & other details as per the Tender No. \_\_\_\_\_ and agreed to install and operate a Grid connected solar photovoltaic power plant of 1200 KWP capacity at the Premises of the Purchaser (8 locations of each 150KWp at Vijaya Dairy plants of TSDDCFL, Telangana) HT service Nos \_\_\_\_\_, all the proceeds of Sale of Power as per the Power Purchase Agreement entered by the FIRST PARTY and SECOND PARTY on the \_\_\_day\_\_\_of 2020 with **Telangana Vijaya Dairy (Power Purchaser)** shall be operated through the Escrow Account.

## SCHEDULE –II

### ESCROW ACCOUNT MECHANISM

#### Deposits into the Escrow Account

All the proceeds of Sale of Power as per the Power Purchase Agreement entered by the FIRST PARTY and SECOND PARTY on the \_\_\_day\_\_\_ of 2020 with **Telangana Vijaya Diary (Power Purchaser)** under Tender No. \_\_\_\_\_ Dated \_\_\_\_\_ shall be deposited into the Escrow Account.

#### Release of Funds from the Escrow Account

Funds lying to the credit of the Escrow Account shall be released/transferred from the Escrow Account on the basis of written instructions by the First party (TSREDCO) to the Second party as and when due as per the Power Purchase Agreement entered by the FIRST PARTY and SECOND PARTY on the \_\_\_day\_\_\_ of 2020 with **Telangana Vijaya Diary (Power Purchaser)** under Tender No. \_\_\_\_\_, DT: \_\_\_\_\_. The instructions will be signed by the Authorized Signatory of the First party (TSREDCO) and will be submitted to Escrow Agent.

## SCHEDULE-III

### LIST OF AUTHORISED SIGNATORIES

#### 1. FIRST PARTY

Name: Telangana State Renewable Energy Development Corporation Limited.

Designation:

Address: D. No. 6-2-910, Visvesvaraya Bhavan, The Institution of Engineers Building, Khairatabad, Hyderabad - 500 004.

Email Address:

Fax:

Signature:

#### 2. SECOND PARTY

Name: M/s. \_\_\_\_\_ (Power Producer)

Designation:

Address:

Email Address:

Fax:

Signature:

#### 3. ESCROW AGENT

Name: \_\_\_\_\_ (Bank)

Designation:

Address:

Email Address:

Fax:

Signature: