## 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)
the same on behalf of our Organisation.
Date:
Signature:
Seal:

#### 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)

#### 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
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 .

	d hereinabove, our liability under this Guarantee is only) and it shall remain in
	uaranteed amount or any part thereof under this Bank pon 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 invalue.	in the name of the Executing Bank and of Appropriate
	2 The Performance Bank Guarantee (DRG) shall

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 only). Our Guarantee shall remain in foVijaya Dairye 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]

## TSREDCO/SE/SPV/Govt./VIJAYA DAIRY-1200KWp/RESCO/2020, Dated.09.11.2020

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
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
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
Mrduly authorized by the Board to issue such Power of Attorney
Dated this day of
AcceptedSignature of Attorney (Name, designation and address of the Attorney)
Attested

## TSREDCO/SE/SPV/Govt./VIJAYA DAIRY-1200KWp/RESCO/2020, Dated. 09.11.2020

(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)

[insert

M/s

\_\_ day of

Lead

Company

of

name

a Firm

THIS Consortium Agreement ("Agreement") executed on this\_\_\_\_\_

between

2020

Member]

3.

4.

incorporated under the laws of .		and having its Registered
Office atshall include its successors, exec	(hereinafter called the cutors and permitted ass	"Lead Member", which expression igns)
the laws of	a (hereinafter	rm / Company incorporated under and having its Registered Office at called the "Technical Member",
which expression shall include expression shall include its succ		ors and permitted assigns), which rmitted assigns)
WHEREAS, each Member indivion Members shall be collectively re		to as the "Member" and both the ers" in this Agreement.
Limited(hereinafter called TSRE 1956 has invited response to Te	DCO), a Company incornder No dated oning including warranty,	Development Corporation Ltd porated under the Company's Act, for design, manufacture, supply, operation & maintenance of Roof
Technical Consortium Agreeme Technical Eligibility Criteria as	nt with another Compan stipulated in the Tende submit a legally enforce	Lead Member may enter into a ny / Corporate entity to fulfill the er document. The Members of the ceable Consortium Agreement in a
NOW THEREFORE, THIS AGREEM	ENT WITNESSTH AS UNDE	ER:
In consideration of the above pr do hereby mutually agree as fol	_	all the Members in this Consortium
	), shall a	bers to the Agreement do hereby act as the Lead Member as defined chnical Member
<ol><li>The Lead Member is here to bind the Consortium and rece</li></ol>		echnical Member of the Consortium on their behalf.

for providing technical knowledge for "Design, Manufacture, Supply, Erection, Testing and

Commissioning including Warranty, Operation & Maintenance" to the lead member.

The Lead Member shall be liable and responsible for ensuring the individual and

Subject to the terms of this Agreement, the Technical member shall be responsible

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.

- 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

Witnesses:

- (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 t	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 $[ullet]$

### 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	Design Qualification and Type Approval for Crystalline Silicon
14286	Terrestrial Photovoltaic (PV) Modules
IEC 61701	Salt Mist Corrosion Testing of Photovoltaic (PV) Modules
IEC 61853- Part 1/	Photovoltaic (PV) module performance testing and energy
IS 16170: Part 1	rating -: Irradiance and temperature performance measurements, and power rating
	Photovoltaic (PV) Modules - Ammonia (NH3) Corrosion Testing (As per the
IEC 62716	site condition like dairies, toilets)
	Photovoltaic (PV) Module Safety Qualification - Part 1: Requirements for
IEC 61730-1,2	Construction, Part 2: Requirements for Testing
	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
IEC 62804	advisory for installations where the system voltage is < 600 VDC)
	Photovoltaic (PV) modules - Transportation testing, Part 1:
IEC 62759-1	Transportation and shipping of module package units
Solar PV Inverters	
IEG (0.400 / IEG (0.400 0	Safety of power converters for use in photovoltaic power systems - Part 1: General requirements, and Safety of power converters for use in
IEC 62109-1, IEC 62109-2	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	Photovoltaic Systems - Power conditioners: Procedure for Measuring
applicable)	Efficiency (10%, 25%, 50%, 75% & 90-100% Loading Conditions)
BS EN 50530 (as	Overall efficiency of grid-connected photovoltaic inverters: This European
applicable)	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	Utility-inteVijaya Dairyonnected Photovoltaic Inverters - Test Procedure
1741 / IEEE 1547	of Islanding Prevention Measures
(as applicable)	
IEC 60255-27	Measuring relays and protection equipment - Part 27: Product safety requirements
IEC 60068-2 (1, 2,	Environmental Testing of PV System - Power Conditioners and Inverters
14, 27, 30 & 64)	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	Electromagnetic Interference (EMI) and Electromagnetic
(as applicable)	Compatibility (EMC) testing of PV Inverters

## <u>Fuses</u>

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

## Earthing /Lightning:

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

## Note:-

- Equivalent standards may be used for different system components of the plants. 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	Specificati ons	Quantity	Make
Α	Solar PV module			
A.1	Aggregate Solar PV capacity (kWp)			
В	Grid Tie inverter (Type and Capacity)			
B.1	Aggregate Inverter capacity (kVA)			
С	Module mounting structure (Certified by a Structural Engineer (Mandatory for 101 kWp to 1000 kWp)			
D	Array Junction Box			
E	AC Distribution Board			
F	Cable (All type)			
G	Earthing Kit (maintenance free)			
Н	Meters			
1	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
- 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 information14. 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 Auth	orized person	
5	Phone No.'s	·	
6	Fax No.		
7	Email		
8	Nature of the firm (Proprietary/partnership/et	:c)	
9	Bank Details of the Agency	:	
	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 & I	: :
16	Details of certificates enclo	sed	

IN COVER 'A'

## **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	Valid Registration with TSREDCO			
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	Original Consortium			
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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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
epugnant to	the mean	ning or	context	hereof, be o	leemed	to include i	its succ	essors

AND

and assigns).

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 l	Power	r Produ	icer has been n	otified as s	successful bid	der by TS	SREDC	O for
	"Des	ign, S	Supply,	Installation, T	esting and	commissionir	ng of 120	0 KWp	Grid
	conn	ected	Groun	d Mounted po	wer plant a	t 8No's locati	ions of ea	ach 150	KWp
	at Vi	jaya	diary	plants of TSD	DCFL, TI	ELANGANA	under R	ESCO	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, statue, 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;

- "Expiration Date" means the date on which the Agreement terminates (q) by reason of expiration of the Term.
- "Force Majeure Event" has the meaning set forth in Section 11.1 (r)
- "Governmental Approval" means any approval, consent, franchise, (s) 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.
- "Governmental Authority" means any central, state, regional, district, (t) 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.
- "Indemnified Persons" means the Purchaser Indemnified Parties or the (u) Power Producer-indemnified Parties, as the context requires.
- "Insolvency Event" means with respect to a Party, that either (v)
  - 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=(Measured output in kW / Installed plant capacity in kW\* 1000 W/m² /Measured radiation intensity in W/m²)
- (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 entirely 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 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.
	, Datedand 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 punchlist 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 licencee 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.

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.

### **Delivery of Solar Power**

(c)

#### **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.
- 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	d by
		selected bidder)	

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 if 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.
- 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. Inspite of these measures, if any damages to the System takes place due to theft or vandalism then the same shall be claimed or reimbursed through insurances by Power producer. In case of theft and vandalism acts, the Purchaser will assist the Power Producer in procedures of filing FIRs, insurance claims and any other related activities. 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 interferer 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.
- (1) **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 preagreed costs on actuals only, arising from moving, disassembling and reinstalling/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