

Draft Solar Energy Purchase Agreement (EPA) subject to approval by
TNERC

This agreement made at _____ on this _____ day of _____ Two thousand _____ between M/s. _____ (Solar Power Generator name and address) hereinafter called "the Solar Power Generator", (SPG) which expression shall wherever the context so permits, mean and include the successors in interests, executors, administrators and assigns represented by Thiru. _____ as Party of the First part and M/s.....(Name of the Distribution Licensee)..... and having its office at _____ hereinafter called "the Distribution Licensee", which expression shall wherever the context so permits, means and includes the successors in interest, administration and assigns represented by the (Designation of the Distribution Licensee's officer) as Party of the Second part;

WHEREAS **Under State Solar Policy** the SPG selected through competitive bidding has offered to the Distribution Licensee, to sell Solar Power generated from their proposed SPG No _____ No. of Generators of _____ make having capacity of _____ MW each installed at SF.No. _____ of _____ Village _____ Taluk in _____ District / to be commissioned on _____ .

AND WHEREAS the Distribution Licensee has accepted the said offer and agreed to buy the power from the party of the first part from their _____ No. of Generators of _____ MW capacity vide Lr.No _____ on the terms and conditions hereinafter agreed to;

NOW THESE PRESENTS WITNESSETH AND THE PARTIES HEREBY RESPECTIVELY AGREE AS FOLLOWS:

TERMS AND CONDITIONS. –

1. Definitions. -

In this agreement, -

(a) “Commission” means the Tamil Nadu Electricity Regulatory Commission;

(b) “Force Majeure” means any event which is beyond the control of the parties to this agreement which they could not foresee or with a reasonable amount of diligence could not have foreseen or which could not be prevented and which substantially affect the performance by either party, such as, but not limited to. -

(i) natural disasters (earthquakes, hurricane, floods);

(ii) wars , riots or Civil Commotions and other upheavals; and

(iii) grid/distribution system’s failure not attributable to parties hereto;

(c) “interface line” means the electric line between the interconnection point and the nearest point at which the electric line could technically be connected to the existing grid or distribution system;

(d) “inter connection point” means the line isolator on outgoing feeder on HV side of the pooling substation or generator transformer as the case may be;

(e) “MNRE” means the Ministry of New and Renewable Energy, Government of India;

2. Interfacing and evacuation facilities. -

(a) The SPG agrees to bear the entire cost of the transmission system required for power evacuation;

SPG agrees to erect the interfacing line as per section 10(1) of Electricity Act 2003. The SPG agrees to pay the cost of bay extension work and any other improvement works to be executed by TANGEDCO/TANTRANSCO under Deposit Contribution Works (DCW) basis after finalization of transmission system

required for power evacuation. The SPG agrees to pay 50% of the material cost of bay extension work, and other improvement works towards operation & maintenance of the same for the entire life period. If establishment of separate sub-station is required for power evacuation, SPG agrees to establish and maintain the substation under section 10(1) of Electricity Act 2003.

(b) The SPG and the Distribution Licensee shall comply with the provisions contained in Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007 which includes the following, namely;

- (i) Connection Agreement;
- (ii) Site responsibility schedule;
- (iii) Access at Connection site;
- (iv) Site Common Drawings;
- (v) Safety;
- (vi) Protection System and Co-ordination; and
- (vii) Inspection, Test, Calibration and Maintenance prior to Connection;

(c) The SPG agrees to comply with the safety measures contained in section 53 of the Electricity Act, 2003 (Act 36 of 2003);

(d) Both the parties shall comply with the provisions contained in the Indian Electricity Grid Code 2010, Tamil Nadu Electricity Grid Code 2005, the Electricity Act, 2003, other Codes and Regulations issued by the Commission, CERC and / Central Electricity Authority and amendments issued thereon from time to time;

(e) Both the parties shall comply with the policies and guidelines issued by the Government of India / Government of Tamil Nadu from time to time.

3. Operation and Maintenance. -

(a) The SPG shall be treated as 'MUST RUN' power plant and shall not be subjected to merit order dispatch principles;

- (b)** In case of solar photovoltaic power generator, the generator shall restrict the harmonic generation within the limit set by the Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007 applicable to the Distribution Licensee and bulk consumer;
- (c)** The SPG agrees to minimize drawl of reactive power from the Distribution Licensee's grid as stipulated in the Indian Electricity Grid Code /Tamil Nadu Electricity Grid Code / Commission's orders in force;
- (d)** The SPG agrees to provide suitable automatic safety devices so that the Generators shall isolate automatically when the grid supply fails;
- (e)** The SPG agrees to maintain the Generators and the equipments including the generator transformer, switch gear and protection equipments and other allied equipments at the generator end at their cost to the satisfaction of the Distribution Licensee;
- (f)** The changing of the rupturing capacity of the switch gear and settings of the relays, if any, shall be subject to the approval of the Distribution Licensee;
- (g)** There shall be no fluctuations or disturbances to the grid or other consumers supplied by the grid due to paralleling of the Generators. The SPG shall provide at their cost adequate protection as required by the Distribution Licensee to facilitate safe parallel operation of the Generators with grid and to prevent disturbances to the grid;
- (h)** The SPG agrees that the Distribution Licensee shall not be responsible for any damage to their Generators resulting from parallel operation with the grid and that the Distribution Licensee shall not be liable to pay any compensation for any such damage;
- (i)** The generators shall be maintained effectively and operated by competent and qualified personnel;

(j) In case of unsymmetrical fault on HV Bus, the SPG shall share the fault current according to impedance of the circuit. To meet such contingency and for safe operation of the Generator, the SPG shall provide the following scheme of protection, namely, -

(i) Separate overload relays on each phase and earth fault relays should be provided by the generators at their end. Under no circumstances, these relays shall be bypassed;

(ii) With suitable current transformer and relay connections, the load sharing by the SPG and Distribution Licensee shall be limited to their rated capacity;

(iii) Adequate indication and control metering for proper paralleling of the generators on the HV bus;

(iv) Protection co-ordination shall be done by the Distribution Licensee in consultation with the State Transmission Utility and relays and the protection system shall be maintained as per site responsibility schedule;

(k) Grid availability shall be subject to the restriction and control as per the orders of the State Load Dispatch Centre and as per Tamil Nadu Electricity Grid Code.

4. Metering Arrangements. -

(a) The metering arrangements with facilities to record export and import of energy shall be provided in accordance with the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, Commission's Intra State Open Access Regulations, 2005, Tamil Nadu Electricity Distribution Code, 2004 and Tamil Nadu Grid Code, 2004 in consultation with Distribution Licensee. The periodicity of testing, checking, calibration etc. will be governed by the Regulations issued by the Central Electricity Authority / Commission in this regard;

(b) Main and Check Meters shall have facility to communicate its reading to State Load Dispatch Centre on real time basis or otherwise as may be specified by the Commission. Meter reading shall be taken as per the procedure devised by the Distribution Licensee;

(c) The term 'Meter' shall mean a 'Meter' as defined in regulation 2 (p) of the Central Electricity Authority (Installation and Operation of Meters) Regulations 2006;

(d) The Distribution Licensee may provide Check Meters of the same specification as that of Main Meters;

(e) The SPG can have a standby meter of the same specification tested and sealed by the Distribution Licensee;

(f) The Main and Check Meters shall be tested for accuracy as per the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006. The meters may be tested using NABL accredited mobile laboratory or at any accredited laboratory in the presence of parties involved. Both parties shall seal Main and Check meters. Defective meter shall be replaced immediately;

(g) Reading of Main and Check meters shall be taken periodically at appointed day and hour by authorized officer of Distribution Licensee and Generator or his representative;

(h) Check meter readings shall be considered when Main Meters are found to be defective or stopped. Provided that, if difference between the readings of main and check meter vis-à-vis main meter reading exceeds twice the percentage error applicable to relevant class, both meters shall be tested and the one found defective shall be immediately replaced and reading of other will be considered;

(i) If during test or calibration, both the main meter and the check meter are found to have errors beyond permissible limits, the bill shall be revised for the previous 3 (Three) months or for the exact period if known and agreed upon by

both the parties, by applying correction as determined by the meter testing Wing of the Distribution Licensee to the consumption registered by the meter with lesser error;

(j) The SPG shall check the healthiness of meters (due to blowing of the P.T. fuses or due to any other causes) by superficially checking indicator lamps or by taking readings as frequently as possible. If both the main meter and the check meter fail to record energy either due to the blowing of the P.T. fuses or due to any other causes, the energy imported /exported may be arrived at based on the standby meter, if available, or by mutual agreement of the parties involved;

(k) The interface meters may be Special Energy meters with appropriate communication facilities to be connected with SLDC / Control Centre.

5. Scheduling of Solar Power. -

The SLDC will instruct the SPG to schedule their power. Accordingly, the Unscheduled Interchange (UI) commercial mechanism will be extended to the SPG. Such scheduling, UI mechanism, etc. will be governed by the orders issued by the Commission from time to time.

6. Rate of Energy and other Charges. -

(a) **Energy Charges:** The Distribution Licensee agrees to pay energy charges at the power purchase rate finalized through competitive bidding as follows:

The rate now finalized through competitive bidding at ...Rs. R1..... per unit will be escalated at the rate of 5% every year upto ten years from 01.04.2014. The applicable rate at the end of 10th year will remain constant for the remaining PPA period.

The applicable power purchase rate for the entire agreement period is detailed below:

Period	Power Purchase Rate
First year up to 31.03.14	R1
Second year (01.04.14 to 31.03.15)	R2 = R1+0.05 R1

Third year (01.04.15 to 31.03.16)	$R3 = R2 + 0.05 R2$
Fourth year (01.04.16 to 31.03.17)	$R4 = R3 + 0.05 R3$
Fifth year (01.04.17 to 31.03.18)	$R5 = R4 + 0.05 R4$
Sixth year(01.04.18 to 31.03.19)	$R6 = R5 + 0.05 R5$
Seventh year (01.04.19 to 31.03.20)	$R7 = R6 + 0.05 R6$
Eighth year (01.04.20 to 31.03.21)	$R8 = R7 + 0.05 R7$
Ninth year (01.04.21 to 31.03.22)	$R9 = R8 + 0.05 R8$
Tenth year (01.04.22 to 31.03.23)	$R10 = R9 + 0.05 R9$
From Eleventh year to Twentieth year	R10

(b) Reactive Power Charges is recoverable as per the Commission's regulation / Code in force.

(c) If it deviates from schedule, the payment will be paid as per clause 5 of this agreement.

7. Billing and Payment. -

(a) The SPG shall raise a bill every month for the net energy sold after deducting the charges for startup / standby power and reactive power;

(b) The Distribution Licensee shall make payment to the SPG for the solar energy purchased within 30 days of receipt of the bill.

TANGEDCO agrees to provide unconditional revolving and irrevocable Letter of Credit which shall be drawn upon the solar power plant developers.

TANGEDCO agrees to provide LC from public sector/scheduled commercial bank. The payment shall be made on 30th day from the date of receipt of passed bill (Invoice) at LC opener's bank. If the 30th day (due date) happens to be a holiday for TANGEDCO / Banks, then payment shall be made on the next working day. SPG agrees to bear all the expenses relating to LC viz. Opening charges, Maintenance charges, Negotiation Charges and renewal charges. The revolving LC shall have a term of 12 months and validity of the LC shall be

renewed year after year and remains valid upto expiry of the agreement and the amount shall also be renewed for an amount equal to 105% of the average of monthly billing of proceeding 12 Months.

8. Applicability of the Acts, Regulations and Guidelines. -

The parties shall be bound by the provisions contained in the Electricity Act, 2003, Regulations, notifications, orders and subsequent amendments, if any, made there under from time to time by the Commission and the policy directions issued by the Government of India /Government of Tamil Nadu;

9. Agreement period. -

(a) This agreement period shall be 20 years considering the life period of the project;

(d) The parties to the agreement shall have the option of exiting in case of violation with three months notice to the other party.

10. Name Transfer :

The Solar Power Generator may name transfer the Solar Power Plant after commissioning of Solar Power Plant on payment of Rupees one lakh as Name Transfer fee to TANGEDCO.

11. Settlement of Disputes.-

If any dispute or difference of any kind whatsoever arises between the parties to this agreement, it shall, in the first instance, be settled amicably by the parties, failing which either party may approach the Commission for the adjudication of such disputes under section 86 (1) (f) of the Electricity Act, 2003;

12. Force Majeure:

Both the parties shall ensure compliance of the terms and conditions of this agreement. However, no party shall be liable for any claim for any loss or

damage whatsoever arising out of failure to carry out the terms of this agreement to the extent that such failure is due to force majeure. But any party claiming the benefit of this clause shall satisfy the other party of the existence of such an event(s).

13. Termination:

SPG agrees that Power Purchase Agreement could be terminated if the solar power plant is not commissioned within 18 months from the date of issue of Lol or power purchase rate will be reduced by one percent per month of delay beyond 18 months from the date of issue of Lol.

In witness whereof Thiru. _____ acting for and on behalf of _____ (SPG name) and _____ Authorized Officer of the Distribution Licensee acting for and on behalf of the Distribution Licensee have hereunto set their hands on the day, month and year Herein above first mentioned.

In the presence of witnesses:

- 1)
- 2)

Signature
Solar Power Generator
Common seal

In the presence of witnesses:

- 1)
- 2)

Signature
Authorized Officer of the Distribution Licensee