

Solar Energy Purchase Agreement (EPA)

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”, 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 this agreement will supersede the Memorandum of understanding (MOU) if any signed between the Solar Power Generator (SPG) and the Distribution Licensee for purchase of solar power;

WHEREAS the SPG has sent to the Distribution Licensee, his proposal to sell Solar Power generated from his SPG No _____ No. of Generators of _____ make having capacity of _____ MW each installed at SF.No. _____ of _____ village _____ taluk in _____ district / commissioned on _____;

AND WHEREAS the Distribution Licensee has accepted the said proposal and agreed to buy the energy 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) **“Central Commission”** means the Central Electricity Regulatory Commission as defined in Section 2(9) of the Electricity Act, 2003;
- (b) **“Commission”** means the Tamil Nadu Electricity Regulatory Commission;
- (c) **“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;
- (d) **“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;
- (e) **“inter connection point”** means the line isolator on outgoing feeder on HV side of the pooling sub station or generator transformer as the case may be;
- (f) **“MNRE”** means the Ministry of New and Renewable Energy, Government of India;
- (g) **“Programme Administrator”** means the Indian Renewable Energy Development Agency (IREDA) for administration of Rooftop PV and small solar generation Programme (RPSSGP) in accordance with MNRE’s

guidelines for rooftop and other small solar power plants connected to distribution network (below 33 kV).

2. Interfacing and evacuation facilities. -

- (a)** The Distribution Licensee agrees to establish the interface lines up to the interconnection point. The SPG agrees to pay the Infrastructure Development Charges (IDC) of Rs.25.75 lakhs per MW to the Distribution Licensee for establishing, operating and maintaining the Line / sub-station. The payment of IDC is subject to the outcome of the Civil Appeal No.1304 of 2010 filed by Indian Wind Energy Association before the Hon'ble Supreme Court of India;
- (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, Tamil Nadu Electricity Grid Code, the Electricity Act, 2003, other Codes and Regulations issued by the Commission / Central Electricity Authority and amendments issued thereon from time to time;
- (e)** Both the parties shall comply with the 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 drawal 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 transformer, switch gear and protection equipments and other allied equipments at the generator end at his 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) The interface lines shall be maintained by the Distribution Licensee at their cost;
- (h) 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 his 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;
- (i) The SPG agrees that the Distribution Licensee shall not be responsible for any damage to his 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;

- (j) The generators shall be maintained effectively and operated by competent and qualified personnel;
- (k) 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. 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;
- (l) 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 may 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 rate of Rs.as per the Commission's order No. and as amended from time to time;
- (b) The Generation Based Incentive (GBI) will be payable to the distribution licensee by IREDA (Programme Administrator) both for the energy sold by the generator and the energy captively consumed by the generator (to be measured on AC side of the inverter). The GBI shall be equal to the difference between the tariff determined by the Central Commission and the base rate which is Rs. 5.50 per kWh for the financial year 2010-11 and thereafter escalated at 3% per year.

Explanation: Base Rate of Rs 5.50/unit to be considered for the purpose of computation of GBI, shall remain constant over duration of 25 years. Thus, GBI determined for a project (which is the difference of Central Commission determined tariff and Base Rate) shall remain constant for entire duration of 25 years.

(c) Reactive Power Charges is recoverable as per the regulation / Code in force.

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 **(including deemed purchase corresponding to captive consumption met from solar generation)** within 30 days of receipt of the bill. Any delayed payment beyond 30 days is liable for interest at the rate of 1% per month;

(c) The captive consumption of solar power by the SPG shall be billed by the Distribution Licensee at the per unit rate equal to the difference between the per unit rate fixed by the Commission and the per unit GBI. This billed amount will be deducted by the Distribution Licensee from the monthly bill payable to the SPG.

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 guidelines issued by the Government of India / Government of Tamil Nadu;

9. Terms and Conditions and agreement period. -

- (a) In case of part commissioning of the Solar Project (not lower than 100 kW capacity) at the end of 6 months beyond the stipulated period of 12 months from the date of issuance of Registration Certificate (confirming applicability for GBI) as prescribed in the MNRE's guidelines for rooftop and other small solar power plants connected to distribution network (below 33 kV), the partly commissioned capacity shall be considered to be eligible for GBI subject to the condition that the SPG shall have to ensure separate metering arrangement for the partly commissioned project capacity to be eligible to avail GBI. The un-commissioned part of the project shall however not be eligible for consideration for GBI;
- (b) The Distribution Licensee shall ensure that the project location as specified in EPA shall be the same as indicated in the MoU;
- (c) This agreement period shall be 25 years considering the life period of the project;
- (d) The parties to the agreement are at liberty at any time to renegotiate the existing agreement mutually in accordance with the Commission's order in force;
- (e) The Distribution Licensee shall provide certificate of power purchased (including deemed purchase corresponding to captive consumption met from solar generation) from the SPG to the Programme Administrator on a monthly basis. The certificate shall be based on the joint meter reading taken by the SPG and the Distribution Licensee.

10. 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;

11. 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)

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 hereinabove first mentioned.

In the presence of witnesses:

1)

Signature
Solar Power Generator
Common seal

2)

In the presence of witnesses:

1)

Signature
Authorized Officer of the Distribution Licensee

2)

(By the order of the Commission)

**Secretary,
Tamil Nadu Electricity Regulatory Commission.**