

**BEFORE THE HON'BLE KERALA STATE ELECTRICITY REGULATORY COMMISSION**

**In the matter of** : **Petition for grant of approval for inviting bids on reverse e-bidding route with e-reverse auction for procuring 200 MW solar power from solar PV power plants to be established within the state of Kerala on IPP mode.**

**Petitioner** : **Kerala State Electricity Board Limited**  
**Vydyuthi Bhavanam, Pattom,**  
**Thiruvananthapuram**

**The petitioner humbly submits as follows:**

1. The petitioner, Kerala State Electricity Board Limited (KSEBL) is integrated state public electricity utility in the State of Kerala, performing the three functions of electricity Generation, Transmission and Distribution through its three Strategic Business Units (SBU).
2. Hon'ble Commission has notified the KSERC (Renewable Energy) Amendment Regulations 2017 on 02.11.2017. In line with this, KSEBL is obliged to purchase certain percentage of the total energy supplied by it to the consumers of the state from renewable energy sources. KSEBL has been putting in concerted effort for developing renewable energy sources viz small hydro, wind and solar. However, the target could not be met with and considerable gap exists. An evaluation of anticipated addition of renewable energy sources in the coming years also shows considerable gap. Accordingly KSEBL has decided to go in for purchase of renewable energy through competitive bidding process.
3. It is proposed to procure 200 MW of power from grid connected solar PV plants to be located within the state. A set of draft bidding documents has been prepared. The procedure envisaged in the guidelines notified vide no. No.23/27/2017-R&R-1 dated 03.08.2017, office memorandum dated 02.04.2018 and amendment to guidelines dated 14.06.2018 of the Ministry of Power (hereinafter referred to as "guidelines") has been adopted for this purpose. Copy of guidelines is enclosed as **Annexure I**.

4. The proposal envisages purchase of power from interested parties who shall set up solar PV power plants within the state of Kerala based on the bids to be floated by KSEBL. Parameter for bidding proposed is “fixed tariff per kWh applicable for 25 years from the scheduled commissioning date”, to be quoted by such bidders as per clause 4.3.1 of the guidelines.
5. KSEBL has recently received an offer from M/s. NTPC Ltd for supplying solar power from their proposed 15 MW solar PV project to be installed at RGCCPP Kayamkulam. Rate offered by them was Rs.3.00 per kWh. Giving due consideration to this, scarcity of large extent of contiguous land in the state and other socio economic conditions prevailing in the state, KSEBL has fixed the bench mark tariff for bidding as Rs.3.50 per kWh.
6. Reverse bidding is proposed to be conducted through the ‘DEEP’ e-bidding portal of M/s. MSTC. Bidding documents will be made available in this portal. Interested parties can download the documents and submit their bids through this portal. After finalizing the lowest bidder, e-reverse auction will be conducted through the same portal to arrive at the last lowest tariff. Bucket filling mode will be operated for getting 200 MW commencing from the lowest bidder onwards.
7. The process as a whole being new to the state and being done for the first time in Kerala, an “Investors’ Meet” was conducted by KSEBL on 6<sup>th</sup> July 2018 to gather views of potential investors on bidding model proposed. About 170 persons from various firms attended the meet.
8. Even though the conditions enumerated in the guidelines cited have been followed, certain minor deviations from these guidelines have been adopted in the conditions in the bidding documents.
9. Clause 3.1.1 (c) as well as clause 18 of the guidelines stipulates that in case there is any deviation from the guidelines, the same shall be subject to approval by the Appropriate Commission. Accordingly KSEBL is submitting the deviations as detailed below, before this Hon Commission for kind consideration and approval.
10. Deviations:

- (i)** The guidelines are notified by the Ministry of Power under the provisions of the Electricity Act 2003 for long term procurement of electricity from grid connected solar PV projects having size of 5 MW and above through competitive bidding. However, KSEBL has fixed the minimum capacity of the project at a single location as 1 MW. This decision has been taken considering the following:
- a. Extent of land area required for installing a 5 MW solar PV plant with all its connected structures comes to about 25 acres.
  - b. As far as state of Kerala is considered the cost of land is very high in comparison with other parts of the country.
  - c. Scarcity in large extends of barren land suitable for effective installation of solar PV projects.
  - d. Restrictions imposed by Forest Conservation Act in extensive felling of plantations where restricted species also exist.
  - e. Ultimately to increase participation of developers in the bid process.
- (ii)** In the present bid KSEBL does not propose to make available any land to the successful bidders. Full responsibility of identifying suitable land rests with the bidders. This is as per clause 3.2.3 of the guidelines. Clause 3.2.3 (a) as amended, vide, notification dated 14.06.2018 of the Ministry of Power permits a period of 12 (twelve) months from the date of execution of the PPA, for submission of documents/ Lease Agreement to establish possession/ right to use 100% of the required land in the name of the successful bidder. In this regard KSEBL has made a minor modification to the effect that the 12 months period will be counted from the date of Letter of Acceptance issued to the successful bidder. This is done with a view to accelerate the process of execution of PPA and early commencement of the project activities by the successful bidders. Normally 30 days time is allowed for execution of PPA. So the bidder may postpone the execution of PPA till the end of the period and may delay the commencement of the project activities.

- (iii) The guidelines, clause 4.3.1, stipulate that the procurer shall specify that the tariff quoted by the bidder cannot be more than the tariff for grid-connected solar PV power plants, notified by the Appropriate Commission, if any, for the financial year in which the bids are invited. However this Hon Commission has not notified any such tariff for the year 2018-19. Moreover, the tariff for solar PV power has come down much nationwide. As mentioned earlier, M/s. NTPC Ltd has offered a tariff of Rs.3.00 per kWh for its proposed 15 MW solar PV power plant to be set up at RGCCPP, Kayamkulam. Giving due consideration to the scarcity in large extent of land in the state KSEBL has decided to fix a benchmark tariff of Rs.3.50 per kWh for reverse bidding.
- (iv) Clause 5.2.1 (a) of the guidelines stipulates that in case procurement in power (MW) terms, the range of capacity utilisation factor (CUF) will be indicated in the bidding documents. The Solar Power Generator will be liable to pay to the Procurer, penalty for shortfall in availability below such contracted CUF level. Minimum penalty specified is 25% of the cost of this shortfall in energy terms calculated at PPA tariff. However, KSEBL has introduced a review option as, ***“After 15 years from the COD of the project, the minimum specified CUF may be brought down up to 14% to take care of panel degradation”***. In the guidelines no such option is available. This introduction is based on the opinion of the investors participated in the “investors’ meet” held on 6<sup>th</sup> July 2018.
- (v) Clause 5.3 of the guidelines stipulates that the procurer shall provide adequate payment security measures. Three modes of security viz, revolving letter of credit, payment security fund and state government guarantee are proposed. However, KSEBL has not provided for any payment security mechanism. This stipulation is done away with considering that KSEBL has never defaulted payments to any of its power suppliers.
- (vi) Guidelines clause 7.2.2 (a) provides that the procurer shall specify financial criteria in the form of net-worth as a part of the qualification requirement. The net-worth requirement should be at least 20% of the CERC benchmark capital cost, if any, for solar PV projects for the year in which bids are invited

or the estimated project cost. However, in the absence of CERC benchmark capital cost, KSEBL has fixed a net worth limit of Rs.75 lakh per MW.

- (vii)** Clause 11.1 of the guidelines specify that EMD shall not be more than 2% of the solar PV project cost, as determined by CERC, if any, for the financial year in which the bids are invited or the estimated project cost. In the absence of any CERC determined cost KSEBL has fixed the EMD as Rs.1 lakh per MW. Low value of EMD is adopted to ensure more bidder participation.
- (viii)** Clause 11.2 of guidelines specifies the value of Performance Bank Guarantee (PBG). Specified limit is maximum 5% of the CERC cost as above. KSEBL has fixed the PBG as Rs.15 lakh per MW.
- (ix)** As per clause 12, amended as per notification dated 14.06.2018 of the Ministry of Power, the time period for financial closure shall be 12 months from the date of signing of PPA. KSEBL has modified this to be from date of issuance of Letter of Acceptance, as in the case of clause of relating to taking possession of land – point (ii) above.
- (x)** Similar deviation has been adopted in the case of time period specified for commissioning of the project. Clause 14.3 of the guidelines as amended vide notification dated 14.06.2018 of the Ministry of Power allows 21 months from the date of signing of PPA for the completion of projects up to a capacity of 250 MW. KSEBL has changed the reckoning date as date of Letter of Acceptance.
- (xi)** Guidelines, clause 16.5, indicate metering point as the low voltage bus bar of the STU (KSEBL). But in the bid documents, for clarity, KSEBL has elaborated the expression as below:  
  
Metering point shall be the injection point/interconnection point (definition 22 of RfS and 32 of PPA), which shall be
  - (a) The line isolator, if voltage transformation is not required for connecting to the KSEBL Substation/ Switchyard; or

(b) The bus isolator at the voltage of injection, if voltage transformation is required before connecting to KSEBL substation/Switchyard

(xii) In the conditions of bid KSEBL is permitting bidders to propose supply of power from existing solar PV plants or plants that are proposed to be completed in the envisaged commissioning period also. The guidelines are silent in this regard.

(xiii) KSEBL has included a clause relating to reactive power requirement (Clause 1.5 of RfS and Article 4.10 of PPA) as detailed below:

(a) The solar power generator (SPG) shall install necessary equipments in the solar PV power plant for supporting required reactive power to the system as and when required by the SLDC. In case the required reactive power is not met with, the SPG shall be liable to pay penalty as determined by KSERC from time to time.

(b) The SPG shall also install reactive power compensation devices as per Grid Code. The SPG shall not generally draw reactive power from the system of KSEBL at any point of time. If reactive power is drawn from the system, SPG shall be liable to pay penalty at the rate of Rs.0.25 (twenty five paise) per kVARh or the rate fixed by KSERC from time to time.

Guidelines are silent in this regard also. But the condition is a technical requirement for satisfactory functioning of the grid. The rate of penalty of Rs.0.25 per kVARh is the one fixed by this Hon commission in regard to the reactive power drawal by M/s. CIAL in their solar PV power plant at the Cochin International Air Port.

11. Bid documents containing the draft RfS and PPA are submitted as **Annexure II**.

### **Prayer**

KSEBL humbly request that Hon Commission may kindly grant approval for:

1. KSEBL proposal for procuring 200 MW solar power from solar PV power projects to be established within the state of Kerala, through competitive bidding on electronic

mode (e-bidding with e-reverse auction) through the DEEP e-bidding portal of M/s. MSTC.

2. The deviations made by KSEBL, as detailed under para 10 – (i) to (xiii) of the petition, from the guidelines notified by the Ministry of power on 03.08.2017 along with its subsequent amendments.

On behalf of the petitioner,

**Deputy Chief Engineer (Commercial & Planning)**  
**With full powers of Chief Engineer**

**Accompaniments:**

Annexure I – Guidelines of Ministry of Power dated 03.08.2017 and its amendments

Annexure II – Bid documents containing RfS and PPA