

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

**In the matter of:** In the matter of seeking approval for tariff for procurement of power from decentralized solar power plans having capacity of 500KW to 2MW to be set up under Component-A of PM-KUSUM scheme of MNRE and approval of lease rent in accordance with Section 86(1) (b) of Electricity Act,2003 to meet the Renewable Purchase Obligation of KSEB Ltd. as specified in KSERC(Renewable Energy & Net Metering)Regulations,2020 as amended from time to time.

**Petitioner** Kerala State Electricity Board Limited,  
Vydyuthi Bhavan, Pattom,  
Thiruvananthapuram – 695 004.

### **KSEBL MOST HUMBLY STATES THAT:**

1. The petitioner, Kerala State Electricity Board Limited (KSEBL), is an integrated State Public Sector power utility company constituted by the State Government. KSEBL is carrying out the Generation, Transmission and Distribution functions through three strategic business units.
2. Being a distribution licensee, KSEBL is mandated to achieve the Renewable Purchase Obligation targets set by this Hon'ble Commission as per the Kerala State Electricity Regulatory Commission (Renewable Energy & Net Metering) Regulations,2020 and its subsequent amendments.
3. Meanwhile, India has committed before the UNFCCC to increase the share of installed electric power from non-fossil-fuel sources to 40 % by 2030 as a part of our Nationally Determined Contributions (NDCs).Accordingly, the Government of India has set a target of installing 175 GW of renewable energy capacity by the year 2022, which includes 100 GW from solar, 60 GW from wind, 10 GW from bio-power and 5 GW from small hydro-power. In September last year at the United Nations Climate Action Summit, GoI had announced increasing the renewable energy target to 450 GW by 2030.
4. While Large Scale Solar power generation projects are being installed to achieve the ambitious target of 100 GW of Solar Power generation by 2022, it has been planned to simultaneously develop decentralized Solar energy and other renewable energy generation Plants of capacity up to 2 MW which could be connected directly to existing 33/11 kV or 66/11 kV or 110/11 kV sub-stations of Distribution Company, thus saving in transmission system requirement apart from T&D losses. Such plants near these sub-stations may be

developed, preferably by farmers, giving them an opportunity to increase their income by utilising their barren and uncultivable land for solar or other renewable energy based power plants. Cultivable land may also be used if the Solar plants are set up on stilts where crops can be grown below the stilts and sell RE power to DISCOMs.

5. The Government of India has launched New Scheme for Farmers named '**Pradhan Mantri - Kisan Urja Suraksha evam Utthan Mahabhiyan (PM KUSUM)**' Scheme on 22-7-2019. A copy of the guidelines is enclosed as **Annexure-1**.

6. The new scheme has following components:

- i. Component-A: Setting up of 10,000 MW of Decentralized Ground/ Stilt Mounted Grid Connected Solar or other Renewable Energy based Power Plants;
- ii. Component-B: Installation of 17.50 Lakh Stand-alone Solar Agriculture Pumps; and
- iii. Component-C: Solarisation of 10 Lakh Grid Connected Agriculture Pumps.

The Component-A and Component-C will be implemented initially on pilot mode for 1000 MW capacity and one lakh grid connected agriculture pumps respectively and Component-B will be implemented in full-fledged manner with total Central Government support of Rs. 19,036.5 Crore.

All three components of the scheme aim to add Solar capacity of 25,750 MW by 2022 with the total Central Financial Support of ₹ 34,422 crore.

7. MNRE vide order dated 13-1-2021, communicated the sanction of the President of India for capacities to State Implementing Agencies/Electricity Distribution Companies (DISCOMs) under Component-A of PM KUSUM Scheme. As per this order, KSEB Ltd. has been sanctioned a capacity of 40MW. Copy of the order is enclosed as **Annexure-2**.

8. As per this order, the DISCOM will be eligible to get Procurement Based Incentive (PBI) @Rs.0.40/unit purchased or Rs.6.6 Lakh per MW of capacity installed, whichever is less for a period of 5 years from the CoD.

9. Implementation mechanism: The implementation scheme of Component – A is as submitted below.

- 1) Component A: Setting up of 10,000 MW of Decentralized Ground/Stilt Mounted Grid Connected Solar or other Renewable Energy based Power Plants Under this component, solar or other renewable energy based power plants (REPP) of capacity 500 kW to 2 MW will be setup by individual farmers/ group of farmers/ cooperatives/ panchayats/ Farmer Producer Organisations (FPO)/Water User associations (WUA) hereinafter called Renewable Power Generator (RPG). However, States/DISCOMs may allow setting-up of solar or other renewable energy based power plants of capacity less than 500 kW in specific cases. The REPP will be preferably installed

within five km radius of the sub-stations in order to avoid high cost of sub-transmission lines and to reduce transmission losses.

- 2) The Distribution companies (DISCOMs) will notify sub-station wise surplus capacity which can be fed from such RE power plants to the Grid and shall invite applications from interested beneficiaries for setting up the renewable energy plants. The renewable power generated will be purchased by DISCOMs at a pre-fixed levelised tariff. In case, the aggregate capacity offered by Applicants is more than notified capacity for a particular sub-station, bidding route will be followed by DISCOMs to select Renewable Power generator and in such cases the prefixed levelised tariff will be the ceiling tariff for bidding. Selection of bidders will be based on the lowest tariff offered in the ascending order as quoted by the bidders in the closed bid or reverse auction as the case may be. The duration of PPA will be 25 years from Commercial Operation Date (COD) of the project. The total energy purchased from these RE plants will be accounted for fulfillment of RPO by the DISCOM.
  - 3) In case the farmers/ group of farmers/ cooperatives/ panchayats/ Farmer Producer Organisations (FPO)/ Water User associations (WUA) etc. are not able to arrange equity required for setting up the REPP, they can opt for developing the REPP through developer(s) or even through local DISCOM, which will be considered as RPG in this case. In such a case, the land owner will get lease rent as mutually agreed between the parties. The lease rent may be in terms of Rs per year per acre of land or in terms of Rs per unit energy generated per acre of land area. The farmer(s) may opt for payment of lease rent directly in their bank account by the DISCOM, from the payment due to the developer.
  - 4) The REPP under the scheme would be implemented primarily on Barren / uncultivable land. Agricultural land is also permitted under the scheme provided that solar plants are installed in stilt fashion (i.e. raised structure for installation of Solar panels) and with adequate spacing between panel rows for ensuring that farming activity is not affected. The RPG would be free to adopt any renewable energy source or technology while responding to the bid. However, in case of cultivable land with solar plants, the same may be installed on stilts, so that the farmers continue to cultivate the land, apart from getting the benefit of lease rent. In such a case DISCOM may also float bids (in case of specific substations) where setting up of solar projects on stilts may be mandatorily required, and bids for energy tariff invited accordingly.
10. In accordance with the above implementation scheme, KSEBL has notified the substation wise surplus capacity which can be fed from RE power plants to the grid and invited applications from interested beneficiaries for setting up the renewable energy plants. Board also approved two business models for the implementation of the initial sanction of 10KW capacity under Component A of the PM KUSUM scheme –

#### **Model-1: Farmers Investment model**

Farmer can directly invest the full amount and KSEBL purchases the entire solar energy from the farmer at a predetermined levelized tariff for 25 years. The tariff for purchase of solar power from the farmer is fixed as Rs.3.50/unit considering low capacity plants (0.5MWp – 2MWp) under this scheme . Also Hon'ble Commission has fixed Rs.3.50/unit as the ceiling tariff for the procurement of 200MW solar power from solar PV plants within the State vide order dated 19-11-2018 in OP 56/18. If tariff bidding is resorted to for selecting the farmers, this rate will be the upper ceiling rate in the bid.

#### **Model-2: Lease model**

If farmers are not able to invest, they can lease out the land or on right to use agreement to KSEBL for a period of 25 years in this scheme at a lease rent rate of Rs.0.10/unit of solar generation to the farmer for 25 years. KSEBL investment will be through EPC or RESCO mode.

11. Hon'ble Commission under section 86(1)(b) of the Electricity Act,2003 is vested with the power to regulate electricity purchase of distribution licensees including the price at which electricity shall be procured from the generating companies through agreements for purchase of power for distribution and supply within the State.
12. It is humbly requested that Hon'ble Commission may kindly grant approval for tariff for procurement of power from decentralized solar power plans having capacity of 500KW to 2MW to be set up under Component-A of PM-KUSUM scheme of MNRE at Rs.3.50/unit and approval of lease rent payable at Rs.0.10/unit as submitted in this petition.

#### **Prayer**

In light of the above submission, the petitioner prays to Hon'ble Commission approval for tariff for procurement of power from decentralized solar power plans having capacity of 500KW to 2MW to be set up under Component-A of PM-KUSUM scheme of MNRE at Rs.3.50/unit and approval of lease rent payable at Rs.0.10/unit as submitted in this petition.

**Deputy Chief Engineer(Commercial)  
In charge of Chief Engineer(Commercial & Tariff)**

-9-2021  
Acc: as above