

**THE KARNATAKA ELECTRICITY REGULATORY COMMISSION,
BENGALURU**

**Discussion Paper on Determination of Generic Tariff for Wind Power Projects for
the period FY2023-24 to FY2025-26.**

I. Preamble

1. The Commission vide its Order dated 05.06.2018, mandated procurement of wind power by DISCOMs only through competitive e-reverse bidding, with the Generic Tariff determined by the Commission from time to time, as the ceiling price. As such the tariff of Rs.3.26 determined vide Order dated 27.02.2019 was prescribed as the ceiling tariff for the purpose of tariff based reverse bidding for wind power projects during FY20. The above tariff was also made applicable for payment towards any banked energy purchased by the Distribution Licensees and in such other cases, as specified in the relevant orders of the Commission.
2. The tariff determined in the Order dated 27.02.2019, was in force with effect from 1st April, 2019 to 31st March, 2020. Subsequently, vide various Orders, the Commission continued the above ceiling tariff for bidding purpose and as per the latest order dated 10.02.2022 the above ceiling Tariff is continued till 31.03.2023.
3. Thus, the validity of the above ceiling tariff is upto 31.03.2023 and therefore, there is need for determining the ceiling tariff for further period. The Commission proposes to determine the generic tariff for the period FY2023-24 to FY2025-26.
4. Meanwhile, the Commission has notified the KERC (Procurement of Energy from Renewable Sources) (Ninth Amendment) Regulations, 2022. Regulation 9 (2) of the above Regulations mandate procurement of power by the distribution licensees from wind projects through transparent process of bidding, subject to ceiling tariff determined by the Commission.

5. In the above circumstances the Commission proposes to determine the generic tariff for wind power projects and hereby, invites comments/ views/ suggestions from Stakeholders and interested persons on the above proposal, with a request to submit the objections/ comments/ suggestions to the Commission on or before 05.02.2023 to:

**The Secretary,
Karnataka Electricity Regulatory Commission
No.16C-1, Millers Tank Bed Area, Vasantha Nagar,
Bengaluru- 560 052
E-mail:kerc-ka@nic.in**

6. The parameters proposed to be considered for determination of tariff are discussed in the following paragraphs:

The Commission notes that CERC is not determining generic tariff for wind projects so also most of the SERCs. The cost plus tariff determined by some of the SERCs are old and therefore is not considered. Hence, the Commission has obtained data from KREDL regarding capital cost, CUF and O&M cost, based on which the current proposal is made on the above parameters. The proposal is as follows:

i) **Debt- Equity Ratio:**

The Debt-Equity Ratio shall be 70:30, keeping in view the tariff policy, 2016.

ii) **Capital cost:**

As per the data furnished by the KREDL, the capital cost varies from Rs.5.00 Crores / MW to Rs.6.95 Crores, (excluding two projects having Rs. 8.42 Crores / MW). Excluding the said two projects the weighted average cost, the median value and the modal value are Rs.5.75 Crores /MW, Rs.6.35 Crores /MW and Rs.6.00 Crores /MW respectively. The Commission proposes to adopt the capital cost of Rs.6.35 Crores /MW based on Median value, including the evacuation cost.

- iii) **Capacity Utilization Factor (CUF):**
As per the data furnished by the KREDL, the CUF varies from 22.00% to 47.90%. The Commission notes that the average CUF is 33%. Thus the Commission proposes to adopt CUF of 33%.
- iv) **Auxiliary consumption:**
The Commission proposes an auxiliary consumption of 0.5% of the gross generation at normative CUF.
- v) **O&M expenses:**
The KREDL has submitted O&M cost / MW for only 5-projects out of 33-projects, which cannot be considered as a representative sample. The Commission while determining the generic tariff in the year-2019, has considered Rs.8.00 Lakhs / MW in the base year FY20 as the O&M expenses and has provided an escalation at 5% / Annum. Considering the above inflation of 5%, the expenses in FY24 would be Rs.9.6 Lakhs / MW. Therefore, the Commission proposes to consider Rs.10.00 Lakhs / MW as the reasonable O&M expenses for the base year FY24 and proposes escalation of 5% / Annum.
- vi) **Depreciation:**
The Commission proposes to provide 4.67% of the capital cost as the depreciation per annum on straight-line method for the first fifteen years, to ensure debt servicing.
For the purpose of depreciation, excluding land cost, the value of depreciable assets (X=85% of CC) is proposed to be considered as 85% of the Capital Cost (CC). Thus, 90% of depreciable assets after considering 10% salvage value works out to 76.50% of Capital cost (0.90x.85 of CC). Since 70% of Capital cost is recovered in the first 15-years, the remaining 6.50% of depreciation is proposed to be recovered during the remaining period of the power plant life.
- vii) **Debt tenure and Interest on Debt:**
The Commission proposes to consider a Debt tenure of 15-years.
The Commission notes that, with effect from 17.06.2022, Indian Renewable Energy Development Agency (IREDA) has revised the

interest rates, which varies from 8.45% to 9.45% for Wind projects based on grades, for private sector borrowers. For PSUs it varies from 8.20% to 8.95%.

Similarly, PFC has revised the monthly rate of interest from 10.06.2022, which varies from 8.50% to 9.00% for RE projects based on grades, for private sector borrowers. For PSUs it varies from 8.25% to 9.00%.

As per the latest data available for December, 2022, the MCLR of SBI is ranging between 7.70% to 8.00% for loan tenure varying from one year to three years. Considering 200 bps above MCLR, the maximum interest rate would be 10.00%.

CERC in its order dated 12.08.2022 has considered interest rate of 9.12%.

The above facts indicate that the domestic loan would attract interest rate in the range of 8.20% to 10.00%, depending upon the credit ratings of the RE generators.

In view of the above, the Commission proposes 9.50% as the interest rate on term loans.

viii) **Interest on working capital**

The Commission proposes to consider two months' receivables as the working capital.

The CERC in its order dated 12.08.2022, has considered interest on working capital as 10.62% (350 basis points above SBI MCLR which is 150 basis points above term loan interest)

The Commission proposes interest on working capital as 11.00% considering 150 basis points above the proposed term loan interest.

ix) **Return on Equity**

The RoE is proposed at 14% in line with Tariff Policy, 2016.

x) **Income tax:**

The Commission proposes to allow Income Tax, surcharge & cess as a pass-through without factoring the same in the tariff

computations. The amount of Income Tax, surcharge & cess that has to be claimed shall be worked out on the amount of RoE approved by the Commission. The Income Tax at the rates [including surcharge & cess] prevailing in the relevant years shall be claimed separately from the ESCOMs, duly furnishing the necessary proof of tax payment.

xi) The gist of the proposed parameters is indicated below:

Parameter	Existing as per 27.02.2019 order	Proposed in this draft
Debt: Equity	70:30	70:30
RoE	14%	14%
Income Tax	Pass through	Pass through
Interest on term loan	10.50%	9.50%
Depreciation	4.67% for the first 15-years, and the balance spread over the life of the project	4.67% for the first 15-years, and the balance spread over the life of the project
Interest on WC	11.50%	11.00%
Capital Cost [CC] Rs Crs/MW	6.00	6.35
O& M as percentage of CC for base year	8 lakhs/MW in base year	10 lakhs/MW in base year
O & M annual escalation	5.00%	5.00%
PLF	31%	33%
Auxiliary	0.5%	0.5%

Based on the above parameters the levelized tariff works out to Rs. 3.19 / unit (as against the current tariff of Rs.3.26/unit). The above tariff shall be the ceiling tariff for calling bids during the period FY24 to FY26 and shall also be the basis for payment towards any banked energy purchased by the Distribution Licensees in terms of the WBA and in such other cases, as may be specified in the relevant orders of the Commission.

Approved by the Commission


Secretary, KERC