



**ORDER  
OF THE  
WEST BENGAL ELECTRICITY REGULATORY COMMISSION  
IN CASE NO. SM-28/21-22**

SUO-MOTO ORDER OF THE COMMISSION FOR DETERMINATION OF GENERIC TARIFF AND FEED-IN TARIFF IN TERMS OF PARAGRAPH 2.0 OF SCHEDULE -2 AND REGULATION 5.3 OF THE WEST BENGAL ELECTRICITY REGULATORY COMMISSION (COGENERATION AND GENERATION OF ELECTRICITY FROM RENEWABLE SOURCES OF ENERGY) (FIRST AMENDMENT) REGULATIONS, 2020.

**PRESENT:**

**SRI SUTIRTHA BHATTACHARYA, CHAIRPERSON  
SRI DURGADAS GOSWAMI, MEMBER  
SRI PULAK KUMAR TEWARI, MEMBER**

**DATE: 25.10.2021**



सत्यमेव जयते

Suo moto order of the Commission for determination of feed-in tariff and generic tariff in terms of regulation 5.3 and paragraph 2.0 of schedule-2 of the West Bengal Electricity Regulatory Commission (Co-generation and Generation of Electricity from renewable Sources of Energy) (First Amendment) Regulations 2020.



### FACTS IN BRIEF:

1. West Bengal Electricity Regulatory Commission (hereinafter referred as 'the Commission') has notified the West Bengal Electricity Regulatory Commission (Co-Generation and Generation of Electricity from Renewable Sources of Energy) (First Amendment) Regulations 2020 vide Notification No. 71/WBERC dated 21.12.2020 (hereinafter referred as 'RE First Amendment Regulation').
2. In the RE First Amendment Regulation, it is specified that eligible consumers having sanctioned load /contract demand upto 5 kW may set up solar PV system under Net Metering arrangement and eligible consumers, except agriculture consumers, having sanctioned load /contract demand above 5 kW may set up solar PV system under Net Billing arrangement. All eligible agriculture consumers may set up solar PV under Net Metering Arrangement.
3. In the RE First Amendment Regulation, to promote the small scale solar-PV projects in the State, under the proviso of regulation 5.3, it is specified that distribution licensee can purchase power from grid-connected solar projects below the notified capacity for competitive bidding located within the State within the limit of feed-in-tariff to be notified by the Commission from time-to-time.
4. Thus, for implementation of these new provisions of the RE First Amendment Regulations, the followings are required:
  - A. In terms of paragraph (2) of Schedule -2 of RE First Amendment Regulation, the Commission has to specify generic tariff in respect of roof-top solar-PV plants for net-billing purpose.
  - B. In terms of regulation 5.3 of RE First Amendment Regulation, the Commission has also to notify feed-in tariff for solar projects located within the State having capacity below the notified capacity for competitive bidding specified by the Government of India.





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5. In terms of clause (h) of section 61 of the Act, determination of tariff shall inter-alia be guided by the principle of promotion of co-generation and generation of electricity from renewable sources of energy. Further, the Tariff Policy 2016 envisages all renewable power procurement through competitive bidding except from waste to energy plant. Relevant portion of the Tariff Policy under sub-paragraph (2) of paragraph 6.4 is reproduced below:

“States shall endeavour to procure power from renewable energy sources through competitive bidding to keep the tariff low, except from the waste to energy plants. Procurement of power by Distribution Licensee from renewable energy sources from projects above the notified capacity, shall be done through competitive bidding process, from the date to be notified by the Central Government.”

Pursuant to the Tariff Policy, the Government of India has notified Competitive bidding guidelines on 03.08.2017 for procurement of power from grid connected solar PV power projects having capacity of 5 MW and above.

Thus, for solar plant with capacity below 5 MW, appropriate commission is required to determine the related tariff.

6. Accordingly, the Commission issued a discussion paper vide notice reference no WBERC/ Regulation-64 (Vol-II)/ 20-21 /240 dated 4th February 2021 seeking suggestions/ objections / comments from all interested persons / stakeholders by 22.02.2021 proposing following two approaches:
- A. Generic tariff for kW scale solar-PV under net billing (i.e less than 1MW) to be determined under cost plus approach.
  - B. Feed-in-tariff for MW scale solar-PV (i.e 1 MW to less than 5 MW) to be based on the tariff discovered under competitive biddings along with premium to encourage solar projects in the State.





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Any purchase of power by distribution licensee from solar-PV projects of 5MW and above will be only through competitive bidding route following the guidelines issued by the Government of India.

7. The last date for submitting suggestions/ objections/comments was extended upto 22.03.2021. Suggestions/objections/ comments have been received from 25 nos. stakeholders including distribution licensees, consumers' association, NGO engaged in environmental activities and solar entrepreneur companies (solar EPCs). List of the stakeholders who submitted their suggestion, objection and comments are enclosed in Annexure-1.
8. The suggestions, objections and comments from the stakeholders:
  - 8.1 The Solar EPCs in their submissions have stated that the Regulations published on 21.12.2020 have restricted the upper cap limit for net metering to 5 kWp whereas previously there was no upper cap limit for net metering. They also stated that the same is further restricted by contract demand of the consumer which is imposing double restrictions on the consumers who can install Roof Top Solar PV under net-meter in the form of maximum capacity as well as maximum contract demand. It is further stated that, under the concept of net-billing, entire power generated on their own premise by a consumer should be sold to the DISCOM at a tariff specified and then bought back by a consumer for its own consumption at a different tariff without any additional service provided by the distribution licensees. This is in contravention to one's free and fundamental right of generation of electricity for his captive use as provided by the Electricity Act,2003. Thus, this goes against the principles of natural justice.

It is also submitted that generic tariff based on cost-plus method is not appropriate for solar projects less than 5 MW capacity in view of wide array of consumers that each licensee serves. They further submitted that, as consumers are not getting any benefit of tariff revision like IPP or licensee, hence the Commission's approach to assess their cost of installation, cost of finance, etc. is not logical. They suggested that the Commission should assess the





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additional cost incurred by the licensee to service such a customer. They also suggested to consider the simpler approach adopted by other States. Besides, they have raised objection on 17% CUF in WB, considering benchmark CAPEX as per CFA, low interest rate, low O&M norms, non- consideration of degradation factor etc

- 8.2 ABECA submitted that the RE First Amendment Regulation treats domestic consumers as generators of electricity and electricity generated by them is to be sent to the grid. Therefore, the consumers are forced to follow the grid codes. ABECA further mentioned that the consumers may be allowed to utilise the Solar Power in order to minimize the use of thermal power which ,in turn, would decrease the electricity - cost on them.
- 8.3 WBSEDCL submitted that the feed-in tariff or generic tariff should be compared with pool variable cost and not with pool cost of licensee. They also claimed that the proposed feed - in tariff or generic tariff will increase pool power cost of DISCOM since the rate will be more than the variable cost of thermal power on several occasions during real time operation as per Merit Order Despatch.
- 8.4 CESC has broadly agreed to the proposal of discussion paper and found that the generic tariff and feed-in-tariff methods are comparable with average power procurement cost.
- 8.5 IPCL also suggested for a review mechanism on a periodic manner for the cost/ capex structure of solar PV system considering the evolving technology and cost evolution.
- 8.6 Ganatantrik Nagarik Samity, an NGO, in their submission recommended to the Commission to promote the concept of Net Billing and immediate adoption of the same so that the consumers can get the benefit of falling solar tariff. They also submitted that the amendment regulations are more consumer friendly since only net metering was available under the earlier regime which means that specific consumers were getting benefit of solar injection to the grid at their highest tariff slabs. They also agreed with the proposed generic tariff in the discussion paper.





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- 8.7 Regarding feed-in tariff of solar generators below 5 MW capacity, WBSEDCL has opposed the allowable premium of 5% and applicable STU charge and loss. IPCL also expressed their concern over allowing losses. On the contrary, the solar EPCs have suggested that allowing 5% premium is too low comparing the solar irradiance in the State vis-à-vis the areas where MW scale solar projects are developed. They also suggested to consider the cost difference between 1MW to 5 MW solar projects and 500 MW to 1000 MW solar projects due to difference in scale and suggested more leverage.

### **OBSERVATION OF THE COMMISSION**

9. The Commission observes that the issues relating to net-metering vs net-billing were already dealt in details during finalization of RE First Amendment Regulations under the Statement of Reasons. The present exercise is limited to determination of generic tariff for net-billing and feed-in tariff for solar plants below 5MW and does not have any scope to review and redefine the provisions of notified regulations. However, as suggested by the stakeholders, the Commission finds it suitable to analyse the approaches taken by different SERCs across the country in the following paragraphs.
10. From the information available in the public domain, it is observed that the State Electricity Regulatory Commissions (SERCs) across the country have adopted following four broad approaches while determining generic tariff for grid connected roof-top solar pv of consumers:
- A) At average Power Purchase Cost (APPC) of the distribution licensees;
  - B) At weighted average tariff of large scale solar projects adopted by the Commission (under competitive bidding) in last FY + 25% incentive;
  - C) At generic tariff based on cost-plus method;
  - D) At generic tariff or retail tariff of consumer, whichever is higher.

- 10.1 It is observed that generic tariff based on average power purchase cost is a tariff neutral approach in respect of distribution licensees and is simple to implement. Regarding the





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concern of WBSEDCL for the fixed charge component of their PPAs, the Commission observes that the distribution licensee has two options to meet the RPO obligation: i) to purchase renewable power from outside the state with associated STU losses ii) to purchase decentralized roof top solar power without STU losses. In both the cases, the thermal generators will be required to back down generation to accommodate solar power.

- 10.2 The concept of linking generic tariff with the weighted average tariff of solar plants discovered through competitive bidding gives a market signal to the tariff, which promotes new technologies and new business models. In this case, the distribution licensees are purchasing the solar power from the roof-top plant at the same rate as they would have been purchased from the market. However, an incentive of 25% is allowed to roof-top solar systems to bring them at par with the large- scale projects. This approach is mainly adopted by solar rich States.
- 10.3 Generic tariff based on cost-plus model was initially adopted by CERC in its RE Tariff Regulations for grid connected solar generators. However, in view of rapid technological changes, CERC has moved on to case to case basis solar tariff determination. The cost-plus method is still followed by some SERCs to arrive at roof-top solar tariff.
- 10.4 The last approach is basically a combination of cost-plus tariff and retail tariff of consumers to allow some comfort to consumers, in case retail tariff is higher.
11. Considering the relative merit and demerits of each of the above approaches, the Commission considers it prudent to adopt the Average Power Purchase Cost (APPC) based approach for determination of generic tariff for roof-top solar under net billing, as this approach is tariff neutral for DISCOMs and simple to implement. The Commission, in due course of time, plans to review the approach based on the experience gained throughout the State.





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12. Feed-in Tariff in terms of regulation 5.3 of the RE First Amendment Regulations for grid connected solar PV plants below 5 MW capacity:
- 12.1 In the discussion paper it was proposed to fix the feed-in tariff for solar projects located in the State with installed capacity less than 5 MW at a price equivalent to the landed cost of competitive bid at Distribution Licensees' boundary topped up with a premium of 5%. Accordingly, the following principles were proposed:
- (i) Average Competitive bid tariff of solar plants adopted by CERC in the last financial year may be considered as a base;
  - (ii) A premium of 5% over the average competitive bided tariff;
  - (iii) No CTU charge and loss considered in view of existing exemption of solar;
  - (iv) Applicable STU charge and STU losses and
  - (v) Applicable distribution loss.
- 12.2 The Commission has noted the submission made by the stakeholders as mentioned in paragraph 8.7 above.
- 12.3 Considering the slow growth of solar sector in the State, the Commission finds it suitable to allow 5% premium in initial years as proposed in the discussion paper. This will help to develop solar projects in the State and help distribution licensee to meet their RPO. However, in view of the submission from licensees, the Commission agrees to relate the feed-in-tariff with CERC adopted tariff at the ex-bus of solar plant and remove the adjustment of STU charge and loss as proposed in discussion paper. At the same time, it is found logical to provide suitable compensation for low CUF in the State as compared to the national average CUF. For this purpose, national average CUF is considered as 19% in line with the normative solar CUF considered by CERC while determining levelized tariff. As the solar irradiance varies across the State due to climatic conditions, it is found suitable to arrive at an average CUF% based on sample study of five locations across the State – Asansol, Kolkata, Midnapur, Krishnanagar and Siliguri considering the solar map issued by National





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Renewable Energy Laboratory (NREL). The average CUF for the State thus comes to 16.13%.

12.4 In line with the above principles, the feed-in tariff for MW scale solar projects upto 5 MW capacity located in the State is determined as below:

Sl No	Particulars	Rs/kWh
1	Avg of CERC adopted tariff for solar u/s 63 during 2020 - 21	2.59
2	Assuming national average CUF as 19%, the average tariff at West Bengal at average CUF of 16.13%	3.05
3	Tariff with Premium @5%	3.20

### ORDER

13. The generic tariff for the purpose of net-billing, in terms of paragraph (2) of Schedule-II of the RE First Amendment Regulation, shall be equal to the average power purchase cost as allowed by the Commission in the existing Tariff Order of the respective licensee. The licensees shall enter into PPA with the consumers under net-billing with applicable generic tariff as per the provision of the RE First Amendment Regulations. This tariff will continue to remain in force for their useful life or the tenure of PPA, as the case may be.
14. The feed-in tariff, in terms of regulation 5.3 of RE First Amendment Regulation, for solar plants in the State below 5 MW capacity for 2021 – 22 shall be Rs. 3.20/kWh. The Commission shall review the feed-in tariff on annual basis. Till the feed-in tariff is revised by the Commission, this tariff shall continue.
15. Distribution licensees are directed to upload the generic tariff and feed-in tariff rates in their respective websites.
16. A copy of the order shall be posted in the website of the Commission.



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17. Since the office is facing hardship in issuing hard copy of the order due to circumstances beyond control of the Commission, the copy of the order may be downloaded by the distribution licensees and the persons involved in the order from the website of the Commission and act on it.

Sd/-  
(PULAK KUMAR TEWARI)  
MEMBER

Sd/-  
(DURGADAS GOSWAMI)  
MEMBER

Sd/-  
(SUTIRTHA BHATTACHARYA)  
CHAIRPERSON

Dated: 25.10.2021





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### Annexure – 1

SL. NO.	LIST OF STAKE HOLDERS
1	WBSEDCL
2	CESC
3	IPCL
4	ABECA
5	Ganatantrik Nagarik Samity, Howrah
6	D.K.S Enterprise
7	Anandalok Energy Pvt Ltd
8	Nimbus Irrigation
9	Pulse Power Technologies
10	Suncraft energy
11	Solace Renewable Energy
12	Agni Power
13	Sungreen
14	Fourth Partner Energy
15	Advantex Solar
16	Prakash Solar Industries
17	Advantex Technology Solutions LLP
18	HR Solar Solution
19	Vikas Kumar Singh
20	Sandip Solar
21	Green Power Solution
22	Go Solar Power System
23	Switching Avo Electro Power Ltd
24	R & D Solar Enterprise
25	SUBHASHREE