

**PUNJAB STATE ELECTRICITY REGULATORY COMMISSION**  
SITE NO. 3, BLOCK B, SECTOR 18-A MADHYA MARG, CHANDIGARH

**Suo-Motu Petition No. 06 of 2022**  
**Date of Order 06.04.2022**

In the matter of: Petition (Suo-Motu) for approval of Feed-in-Tariff for the purpose of Net-billing and Gross-metering arrangement under PSERC (Grid Interactive Rooftop Solar Photo Voltaic Systems) Regulations, 2021.

Present: Sh. Viswajeet Khanna, Chairperson  
Ms. Anjali Chandra, Member  
Sh. Paramjeet Singh, Member

**Order**

1. The Commission vide its notification dated 18.08.2021 has notified the Punjab State Electricity Regulatory Commission (Grid Interactive Rooftop Solar Photo Voltaic Systems) Regulations 2021, wherein Regulation 9 & 10 specifies as under:

***“9.Net billing arrangement***

*The solar energy generated by the SPV systems is consumed by the consumer with the surplus, if any, being exported as in case of net-metering arrangements. However under net billing arrangements, the monetary value of the imported energy from the grid is based on the applicable retail tariff. The monetary value of the exported solar energy to the grid is based on feed-in tariff approved by the Commission. The monetary value of the exported energy is deducted from the monetary value of the imported energy to arrive at the net amount to be billed (or credited/carried-over). With the net billing mechanism only a single bi-directional energy meter is needed as is done for net-*

*metering. The consumers may opt for Net Billing arrangement as specified in Regulation 4. The energy accounting and settlement under this arrangement shall be in accordance with Regulation 13.*

#### **10. Gross Metering Arrangement**

*In case of gross metering, the consumer does not consume the solar power generated in his premise and entire solar generation is fed in to the grid which is billed at the rate of feed-in-tariff approved by the Commission. The total energy imported by the consumer from the grid is billed at retail tariff determined by the Commission. Two separate meters i.e generation meter and the consumer meter shall be used for gross metering at the point of supply.*

*The consumers may opt for Gross Metering arrangement as specified in Regulation 4 and shall further be restricted to the capacity and network configuration of the electricity system, and the power flows that SPV system may cause. The energy accounting and settlement under this arrangement shall be in accordance with Regulation 14.”*

Therefore, the Commission is required to approve the Feed-in-Tariff for the purpose of accounting of solar power injection for Net-billing and Gross-metering arrangements under the said Regulations. Accordingly, Punjab State Power Corporation Limited (PSPCL) was directed to submit its proposal for consideration of the Commission.

2. In compliance to thereof, PSPCL submitted its proposal for approval of the feed-in tariff vide memo no. 4933 TR-IV/4/178/L-4 dated 02.02.2022.

The proposal is as under:

**“Feed-in-Tariff for Net-Billing Arrangement:**

.....

*It is pertinent to mention that the Solar Rooftop Power Projects under Net Billing arrangement are set up primarily for self-consumption and therefore it should not be compared with solar or other generating plants set up exclusively for sale of electricity to the distribution licensee. Accordingly, the procurement rate for surplus/inadvertent energy injected into the licensee’s grid from such plants after self-consumption should be treated differently.*

.....

*Keeping in view the above aspects, it would be appropriate that the surplus electricity in Net Billing arrangement for commercial prosumers, if any, at the end of billing period should be paid at a nominal tariff proposed to be Rs.1.75/kWh being inadvertent power to PSPCL for the first 3 years. However, for domestic/government category, it would be appropriate to buy back the excess energy generated around the average rate of purchase of solar discovered during various auctions/bidding through the country and proposed to be Rs.2.25/kWh for the first 3 years. The Commission may revise/re-determine the tariff after a period of three years.”*

**Feed-in-Tariff for Gross Metering Arrangement:**

*In case of gross metering, the consumer does not consume the solar power generated in his premise and entire solar generation is fed into the grid....*

*...it is clear that the consumer makes an investment into Rooftop Solar PV plant under Gross Metering arrangement and seeks to get into the business of selling power and making commercial benefit out of the solar power so generated.*

*Keeping in view the above aspects, the following methodologies can be adopted to determine the Feed-in-tariff to be paid to such consumers who opt for rooftop solar plant under Gross Metering arrangement:*

- i) .....can be the weighted average tariff of Competitive Bidding projects adopted by the Commission in last Financial Year. .... In case no bidding/ tariff adoption is done in the previous Financial Year, the latest weighted average tariff of large scale solar projects of 5 MW and more, discovered through Competitive Bidding and adopted by the Commission can be applicable.*
- ii) .....can be 75% of the simple average of tariff discovered and contracted under competitive bidding process and adopted by the Commission for solar projects in the preceding Financial Year.*
- iii) ..... @ Rs. 2.748 per kWh. The said rate has been determined by the Commission for the solar power projects setup/to be setup in Punjab under Kusum Scheme component A.*
- iv) The Feed-in-tariff can be determined by the Commission based on various financial and operational parameters of Gross Metering Arrangement.*

*.....*

*It is worth noting that while bidding under various auctions/bidding for Ground mounted solar plants, the cost of land/lease rental and higher O&M expenses are included. Further the tariff discovered for solar energy through such competitive bidding is continuously below Rs.2.50/- per unit and discovered to be Rs.2.17/kWh lately in one of such bidding by SECI. In spite of this fact, given the high cost of land in Punjab including its limited availability, Rooftop solar system can drive the solarisation in Punjab. Hence, the tariff is proposed to be Rs.2.25/kWh for three years without any escalation/reduction despite market asymmetry. The Commission may revise/re-determine the tariff after a period of three years.*

*..... Once such systems are installed it is difficult for the Discom to track individual approved capacities. In order to discourage the installation of*

*additional unauthorised capacity higher than approved capacity, the tariff payable should be very nominal/minimal for both Net billing and Gross Metering arrangements. Moreover due to rising trend in APPC, it would be appropriate not to link the buyback rate of the solar energy injected into the grid with APPC.”*

3. PSPCL’s proposal along with the requisite Staff Paper was uploaded on the website of the Commission and a public notice, inviting suggestions/objections on the same from various stakeholders, was got published on 12.03.2022 in the leading Newspapers; namely ‘The Tribune’, ‘Hindustan Times’, ‘Ajit’ and ‘Punjab Kesari’. In the public notice it was informed that the suggestions/objections can be filed within 15 days of its publication and the Commission will be holding a public hearing in the matter on 30.03.2022 at 11:30 AM. However, no suggestion/objection has been received from any of the stakeholders. The public hearing was held on 30.03.2022, which was attended by the representatives of PSPCL, Sh. O.P Garg (Secretary Patiala Consumers & Telephone Subscribers Forum) and Col. B.S Chahal. The representatives of PSPCL reiterated the submissions made in its proposal and Sh. O.P Garg & Col. B.S Chahal welcomed the steps being taken by the Commission for promotion of Roof Top Solar in the State.

#### **4. Observations and Decision of the Commission:**

After careful consideration of the proposal submitted by PSPCL, the Commission observes and decides as under:

##### **4.1 Net-Billing Arrangement:**

PSPCL has proposed that the surplus electricity in Net-Billing arrangement should be paid at a nominal tariff of Rs.1.75/kWh for

consumers under commercial category and at the average rate of purchase of solar power discovered during various auctions/bidding in the country (currently proposed to be Rs.2.25/kWh for the next three years without escalation/reduction) for domestic/government category.

**The Commission observes that under the Net-Billing arrangement, while proposing the same Feed-in-tariff for Domestic/Government category consumers as proposed for Gross-Metering arrangement, PSPCL has proposed lower Feed-in-tariff for consumers of the commercial category Net-Billing arrangement. There seems to be no rationale for treating them differently as far as the power injection is concerned and the Commission is not inclined to agree to the same. Thus, the Commission decides to approve the Feed-in-tariff under Net-Billing arrangement for all consumers as per the same methodology as being considered/approved for the Gross-Metering arrangement in the following para.**

#### **4.2 Gross-Metering Arrangement:**

PSPCL, while proposing various methodologies for consideration, has proposed that the Feed-in-Tariff can be the weighted average tariff of Competitive Bidding projects adopted by the Commission in the last Financial Year and in case no bidding/ tariff adoption is done in the previous Financial Year, the latest weighted average tariff discovered through Competitive Bidding and adopted by the Commission can be made applicable.

**The Commission observes that, the concept of linking the Feed-in-tariff with the solar tariff(s) discovered through competitive bidding**

gives an empirical market base to the tariff, which helps to promote new technologies and efficiency in the system. Thus, the Commission considers it prudent to adopt the said methodology and approve the Feed-in-tariff for Gross-Metering arrangement for respective years in the following order of priority depending on their applicability based on available data in the respective years as hereunder:

a) The weighted average of the solar tariffs discovered through Competitive Bidding for solar power projects and adopted/allowed by the Commission in previous Financial Year;

b) The weighted average of the solar tariffs discovered through Competitive Bidding for solar power projects and adopted by the CERC in previous Financial Year.

4.3 Accordingly, PSPCL shall work-out the proposed Feed-in-tariff for the ensuing financial year and submit the same for approval of the Commission along with its annual ARR. However, since the tariff Order of FY 2022-23 has been already issued, the Commission approves the Feed-in-tariff for FY 2022-23 as under:

Sr. No.	Petition /Order	Capacity (MW)	Tariff allowed/ adopted (Rs./ kWh)
1.	Petition No. 71 of 2021/ Order dated 24.01.2022	100	2.33
		150	2.34
Weighted average of the solar power tariffs discovered $((100*2.33+150*2.34)/250)= 2.336$ (say Rs. 2.34/kWh)			

The consumers setting up the Roof top SPV System shall be required to sign a connection Agreement as per the provisions of the PSERC (Grid Interactive Rooftop Solar Photo Voltaic Systems) Regulations 2021.

The petition is disposed of in terms of the above.

Sd/-

(Paramjeet Singh)  
Member

Sd/-

(Anjuli Chandra)  
Member

Sd/-

(Viswajeet Khanna)  
Chairperson

Chandigarh  
Dated: **06.04.2022**

