

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

**Petition No. 60 of 2023**  
**Date of Order: 07.05.2024**

Petition for approval of feed-in-tariff for the purpose of Net-Billing and Gross-Metering arrangement under the PSERC (Grid Interactive Rooftop Solar Photo Voltaic Systems) Regulations 2021 for the period 18.08.2021 to 31.03.2022.

In the matter of: Punjab State Power Corporation Limited (PSPCL),  
The Mall, Patiala, Punjab-147001.

....Petitioner

Versus

M/s K.C. Solvent Extractions Pvt. Ltd., Jalalabad West,  
District- Fazilka, Punjab, India - 152024.

....Respondent

Commission: Sh. Viswajeet Khanna, Chairperson

Sh. Paramjeet Singh, Member

PSPCL: Ms. Harmohan Kaur, CE/ARR&TR

K.C. Solvent: None

**ORDER**

1. The Petitioner (PSPCL) has filed the instant petition for seeking approval of the feed-in-tariff for the period of 18.08.2021 to 31.03.2022 under PSERC (Grid Interactive Roof Top Solar Photo Voltaic System) Regulations 2021, for accounting of solar power under the Net-billing and Gross-metering arrangement. It has been submitted that:

1.1 In compliance to the Commission's direction, PSPCL submitted its proposal for approval of feed-in-tariff vide memo no. 4933 TR-IV/4/178/L-4 dated 02.02.2022, 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. ....*

***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) ..... 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. .... 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.*

*.....”*

1.2 The Commission, vide Order dated 06.04.2022 in Suo-Motu Petition No. 06 of 2022, while observing that there seems to be no rationale for treating the consumers differently as far as solar power injection is concerned, approved 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
<i>Weighted average of the solar power tariffs discovered (100*2.33+150*2.34)/250= 2.336 (say Rs. 2.34/kWh)</i>			

Thereafter, in the Tariff Order for FY 2023-24, the Commission approved the feed-in-tariff of Rs. 2.65/ kWh for FY 2023-24.

1.3 Now, the CGRF's vide its decision dated 18.08.2023 in case no. CF91/2023 (M/s K.C. Solvent) has observed that "regarding Feed-in-tariff for the period from 28.10.2021 to 31.03.2022, respondent is directed to get clarification from the O/O of CE/Commercial, PSPCL, Patiala and its effect be given in the calculations". Accordingly, this petition has been filed for deciding the feed-in-tariff for the period of 18.08.2021 to 31.03.2022 as the "Interactive Roof Top Solar voltaic systems regulation 2021" came into effect from 18.08.2021.

1.4 Further, while submitting that only one PSA/PPA was executed during FY 2020-21 for purchase of long term solar power i.e. with NHPC Limited for purchase of 300 MW Solar Power for 25 years at the discovered tariff of Rs. 2.56/kWh (plus a trading margin of Rs. 0.07/kWh to NHPC), PSPCL has requested to consider and approve feed-in-tariff for the period 18.08.2021 to 31.03.2022 as per the said solar data.

2. After considering the averments made in the petition, the petition was admitted vide the Commission's Order dated 05.12.2023 with observations as under:

*".....M/s K.C Solvent Jalalabad, Punjab, is a necessary party for the adjudication of the matter and is impleaded as a Respondent in the Petition. Notice be issued to M/s K.C Solvent. The Petition involves public interest and as required under Regulation 67 of the PSERC (Conduct of Business) Regulations, 2005, PSPCL shall publish a public notice inviting objections/suggestions from the public.*

*The petition shall be taken up for hearing as well as public hearing on 31.01.2024 at 11.30 AM."*

3. A public notice was got published by PSPCL on 04.01.2024, in 'The Tribune', 'Punjab Kesari', 'Jagbani', 'Rozana Spokesman' and 'Punjabi Tribune', inviting general public and other stake holders to file their objections/suggestions on the petition as well as for participating in the public hearing. Pursuant to same, the petition was taken up for hearing as well as public hearing on 31.01.2024. However, nobody appeared in the public hearing from the public/stakeholders except the Petitioner PSPCL. M/s K.C Solvent Extractions Pvt. Ltd., impleaded as a respondent, informed the registry that they are stuck-up in traffic and would file their reply in writing. The same was allowed to be filed within one week and PSPCL was directed to file rejoinder to the same within one week thereafter. The Respondent M/s K.C Solvent filed its reply/objections to the petition on 01.02.2024. Thereafter, the petition was taken up for hearing on 16.04.2024; however the representative appearing for PSPCL was not aware of the issues/objections raised by the respondent. After hearing the matter, the Order was reserved with direction that PSPCL may file written submissions, if any, within two weeks with a copy to the respondent. In response, PSPCL has filed its written submissions on 19.04.2024.

4. The Commission has examined the petition, reply/objections by the Respondent M/s K.C. Solvent and submissions thereon by the Petitioner PSPCL. Analysis of same is as under:

**4.1 Issue of Petition being belated and time barred:**

**a) Respondent's Objection:**

M/s K.C Solvent has submitting that, since the PSERC (Grid Interactive Rooftop Solar Photo Voltaic Systems) Regulations 2021 was notified on 18.08.2021, the petition for approval of feed-in-tariff for the period of 18.08.2021 to 31.03.2022 is not eligible for consideration at such a belated stage being time barred by the Petitioners' own acts.

**b) PSPCL's submission:**

PSPCL has submitted that the PSERC (Grid Interactive Rooftop Solar Photo Voltaic Systems) Regulations 2021 were made applicable from 18.08.2021. Instant petition has been filed for approval of Feed-in-tariff for the period of 18.08.2021 to 31.03.2022 which is required for implementation of the decision of CGRF and for any case in the future.

**c) Commission's Analysis:**

The Commission notes that the PSERC (Grid Interactive Rooftop Solar Photo Voltaic Systems) Regulations 2021, which has come into force with effect from 18.08.2021, provides that solar power under Net-billing and Gross-metering arrangement shall be accounted for at the Feed-in-tariff approved/determined by the Commission. Accordingly, the State Discom PSPCL was directed to submit its proposal for consideration of the Commission. Pursuant to the same and after following due process of public consultation, the Commission has finalized the methodology and approved the

Feed-in-Tariff for FY 2022-23, vide its Order dated 06.04.2022 in Suo-Motu Petition No. 06 of 2022, with the direction that 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. Thereafter, the Feed-in-tariff for FY 2023-24 was approved in the Tariff Order for FY 2023-24. However, as is evident, the period from 18.08.2021 (i.e. the period from the date of coming into effect of the ibid Regulations) to 31.03.2022 appears to have been overlooked inadvertently. Since the instant petition is for filling of this vacuum in the regulatory provisions, the Respondent's objection to the petition being belated and time barred is overruled in the interest of providing clarity.

**4.2 Issue of allowing benefits under Net-Metering and Net-Billing systems on Prorate Basis:**

**a) Respondent's objection:**

M/s K.C Solvent, while referring to the provisions of the Regulations, has submitted that:

- (i) It is incorrect and unfair to adopt that the maximum capacity of Rooftop SPV (RSPV) systems under Net-Metering shall not exceed 500 kWp. The Respondent was having a 490 kWp RSPV sanctioned on 23.04.2021 and got extension for 510 kWp operational on 28.10.2021. However, it was able to earn more with 490 kWp RSPV system under Net-metering than 1000 kWp system under Net-Billing after spending a huge sum for the extension of the project. The Rooftop SPV system registered under PSERC (Grid interactive Rooftop Solar Photo Voltaic Systems based on

Net Metering) Regulations 2015 shall not be governed by the new Regulations.

- (ii) Further, it goes against the concept of equality. A consumer having a System of 500 kWp under net-metering system with retail tariff is at an advantage compared to a consumer having more than 500 kWp under net-billing with feed-in-tariff. Therefore, in the interest of justice it should have been allowed on prorata basis, so that the same benefit could pass to every one i.e. first 500 kWp under net-metering billing system and exceeding 500kWp should have been allowed under net-billing system.

**b)PSPCL’s Reply:**

PSPCL, while referring to the Proviso under Regulation 3.1 of PSERC (Grid Interactive Rooftop Solar Photo Voltaic Systems) Regulations 2021, has submitted that as per these Regulations a consumer can be considered under one arrangement only. As such, seeking benefit on Prorate basis is against the Regulations.

**c)Commission’s Analysis:**

The Commission refers to the relevant provisions of the ibid Regulations, which reads as under:

*“3.1 These Regulations shall apply to:*

- (a) Net Metering arrangements;*
- (b) Net Billing arrangements;*
- (c) Gross Metering arrangements.*

***Provided that the eligible consumer can opt for only one arrangement i.e either net metering or net-billing or gross metering, as specified in these Regulations.***

3.2 .....



3.3 *These Regulations shall be applicable to all Rooftop Solar Photo Voltaic Systems for which applications are received on or after notification of these regulations ..... **Provided that these Regulations shall also be applicable for applications received on or after notification of these Regulations for enhancing the capacity of the already installed Rooftop SPV systems by an existing consumer.***

.....  
4.3 *The maximum capacity of Rooftop SPV systems under Net-Metering shall not exceed 500 kWp.”*

***[Emphasis supplied]***

As is evident, the ibid Regulations specifically provide that the maximum capacity of Rooftop SPV systems under Net-Metering shall not exceed 500 kWp. The Regulations also provide that the eligible consumer can opt for only one arrangement i.e either ‘Net-Metering’ or ‘Net-Billing’ or ‘Gross-Metering’, and that these Regulations shall also be applicable for applications received on or after notification of these Regulations for enhancing the capacity of the already installed Rooftop SPV systems by an existing consumer. Therefore, the Respondent’s pleas, not being in line with the notified Regulations, cannot be accepted.

**4.3 Issue of Charging electricity duty on Net amount to be billed:**

**a) Respondent’s objection:**

The Commission vide notification dated 18.08.2021 has specified 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).....”*

However, the Petitioner, instead of taking net-SOP (i.e. imported consumption @ retail tariff minus exported units @ feed-in-tariff), is charging the electricity duty on imported consumption @ retail tariff. The Petitioner should be directed to adopt the billing so that loss on account of the electricity duty may not occur to the Respondent and other public. It is further requested that excess amount already recovered on this account be directed to be refunded.

**b)PSPCL’s Reply:**

PSPCL has submitted that the Commission vides Order dated 16.08.2021 in its analysis and decision, in the matter of PSERC (Grid Interactive Rooftop Solar Photo Voltaic Systems) Regulations 2021 notified on 18.08.2021, has already clarified as under:

*“13(ii)....., it is pointed out that the government taxes and levies shall be as per the instructions/guidelines issued by the government.”*

**c)Commission’s Analysis:**

The Commission is in agreement with PSPCL that the issue of instructions/guidelines on charging of the Electricity Duty is in the domain of the State Government and is required to be received and paid to the Government. This is clear from the para13(ii) of the

Commission's Order (Statement of Reasons) issued in the matter of notified Regulations also noted in PSPCL's reply.

## **5. Approval of the Feed-in Tariff**

As discussed earlier in Para 4.1 above, there exists a vacuum in the regulatory provisions of ibid Regulations for the period of 18.08.2021 to 31.03.2022, for which Feed-in-tariff is required to be approved by the Commission, for the purpose of accounting of solar power exported by consumers having Net-billing and Gross-metering arrangement under the PSERC (Grid Interactive Roof Top Solar Photo Voltaic System) Regulations 2021 which came into effect w.e.f. 18.08.2021. The Commission has already finalized the methodology for determination/approval of Feed-in-tariff under ibid Regulations, vide its Order dated 06.04.2022 in Suo-Motu Petition No. 06 of 2022 after following the due process of public consultation, as reproduced below:

*“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 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.”*

Further, the Commission notes that PSPCL has executed only one long term power purchase arrangement during FY 2020-21, i.e. for purchase 300 MW of solar power through NHPC Limited, at the tariff of Rs. 2.56/kWh discovered through Competitive Bidding (plus trading margin of Rs. 0.07/kWh payable to NHPC). Approval for said power purchase arrangement stands accorded by the Commission in Petition No. 18 of 2021.

**In view of above, the Commission decides to approve the Feed-in-tariff for the period of 18.08.2021 to 31.03.2022 as Rs. 2.56/kWh for accounting of solar power exported by the consumers having Net-billing and Gross-metering arrangement under PSERC (Grid Interactive Roof Top Solar Photo Voltaic System) Regulations 2021.**

The petition is disposed of in terms of the above observations and directions.

**Sd/-**  
(Paramjeet Singh)  
Member

**Sd/-**  
(Viswajeet Khanna)  
Chairperson

Chandigarh  
Dated: 07.05.2024