

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

**ORDER**

**DATE: 27.10.2022**

**In the matter of**

**Punjab State Electricity Regulatory Commission (Harnessing of Captive Power Generation) Regulations, 2022**

**1. INTRODUCTION**

The Commission issued the draft notification regarding Punjab State Electricity Regulatory Commission (Harnessing of Captive Power Generation) Regulations, 2022 along with Explanatory Memorandum seeking comments/objections/suggestions from the stakeholders by 16.08.2022. The Public hearing was also held on 17.08.2022 and in the public hearing, oral submissions were made by the officers of PSPCL and other stakeholders. The comments/objections/suggestions from following seven stakeholders including PSPCL have been received;

<b>Objection No. 1</b>	Ms. Priyadashini Sanjay, Managing Director, Mercom India Research Team
<b>Objection No. 2</b>	Dr. Harish Anand, Steel Furnace Association of India
<b>Objection No. 2A</b>	
<b>Objection No. 3</b>	Sh. R.K.Sharma, Chief Operating officer, KRBL Limited
<b>Objection No. 4</b>	ITC Limited
<b>Objection No. 5</b>	Director, PEDDA
<b>Objection No. 6</b>	CE/ARR & TR, PSPCL
<b>Objection No. 7</b>	Sh. M.P.S. Rana, Sr. Vice President, Punjab Alkalies & Chemicals Ltd.

The objections/comments received from the stakeholders on the draft regulations, comments of PSPCL and the analysis & decisions of the Commission on these comments/objections/suggestions along with reasons for the same are as under:-

**2. General Comments**  
**Comments Received**

**(a) Objection 2 & 2A**

**(i) Regulation 28(3) of PSERC Open Access Regulations - Reduction in the contract demand with PSPCL**

Under existing provision of the aforesaid regulations, the contract demand with PSPCL is reduced to the extent power is imported from CPP through open access as provided in the regulation 28(3) of PSERC open access regulation. However, solar power can be generated only for day time, but as per aforesaid regulation, contract demand for night would also be reduced to the extent of the maximum quantum of power is imported in any 15 minute time block of the day from CPP through Open Access. Thus, industrial operations would come to standstill during night. Alternatively, mills have to work with reduced contract demand during night, which is not possible as most of the large industry is continuous process industry and cannot afford to work at reduced capacity in night.

Therefore, the power sourced from renewable based CPP should be exempted from Regulation 28(3) of the Open Access Regulations by amending the Open Access Regulations.

(ii) Renewable power based CPP should be exempted from the above Open Access Regulation and renewable power drawn from CPP should not be restricted to 90% of CD and should be without any upper cap in this regard for promoting *Ease of Doing Business*.

(iii) Punjab Government 'New and Renewable Source of Energy Policy 2012 has announced certain benefits to the renewable energy based CPP users. It is submitted that the same should be clearly mentioned to avoid any confusion at later stage. Further, the provision of 2% wheeling from drawing energy from renewable based CPP should be co-terminus with life of solar plant i.e. the wheeling charges should not be changed for 25 years.

Above exemption be also extended to Group Captive Renewable Plants of independent power producers within State.

(iv) To be eligible for CPP, a unit has to have 26% stake in CPP equity. Now a days, many Independent Power Producers (IPP) have come

up with technical competencies to provide such solar power. Such plants can be located at sites where land is cheaper and solar insolation is high. Further, higher capacity of plant will lower the generation cost which will be additional incentive to industry. The only difference between such IPP and CPP is amount of equity to be invested by CPP based Unit. There is no other difference. It is submitted that Independent Power Producer (IPP) within State, which have dedicated power arrangement with manufacturing unit to supply minimum 85% power injected in the grid should also be granted above facilities given to CPP.

### **PSPCL's Response**

The infirm solar power results in abrupt changes in the availability of PSPCL's schedule for which immediate corrective action is not possible due to limitations of the response time of the system.

The Commission has approved and notified the clause 28(3) in Open Access regulations as decided in Petition No. 16 of 2013 keeping in view the security of the Grid, the adverse technical impact in absorbing the variable energy input and to safeguard the interest of consumers, after following due process of inviting objections/comments from the public/stakeholders through public notices and after due consideration of the same. While approving the amendment commission has also agreed that the sudden variation in drawl by the open access consumers in various time slots of the day certainly affects the quality of power supply to other consumers and it is not practically possible for the PSPCL to manage the system efficiently in such load varying situations. In Petition No. 67 of 2016 also, the Open Access Users Association has also prayed for exemption under Clause 28(3) but the Hon'ble PSERC had not allowed exemption to the Solar CPPs.

### **Commission's Findings and Order**

(i & ii) Regulation 28(3) is not a part of present proceedings of these Regulations. The matter shall be dealt with separately. The power factor to be considered for converting MW into MVA is also a



subject matter of open access procedure and shall be dealt with separately.

- (iii) The regulations are framed under section 181 of the Act and the provisions of the regulations are required to be consistent with the Act and the Rules. However, State Government Policies are also kept in view. The levy of various open access charges are governed by Open Access Regulations, which is not subject matter of these regulations.
- (iv) These regulations shall be applicable to all CGPs as defined in section 2(8) including co-generation plants as defined in section 2(12) read with section 9 of the Electricity Act, 2003 connected to the intra-state transmission and/or distribution system and fulfilling the criteria prescribed in Rule 3 of the Electricity Rules 2005, as amended from time to time.

**(b) Objection 5**

- (i) The regulation does not refer to the NRSE Policy 2012 duly notified by Govt of Punjab for promotion of New and Renewable Sources of Energy in the state. The policy provides for procedure of allotment of NRSE Projects to be set up in the state, incentives for such projects and other facilitations. Therefore, NRSE projects set up as CGPs under the policy and registered with PEDDA need to be covered under the Regulations and suitable provision need to be made in the Regulations for the facilitations provided in the Policy.
- (ii) PSPCL has also filed a Petition No 29 of 2022 for approval of terms and conditions for providing banking facility to solar CPPs. As the regulations of 2009 are proposed to be repealed and substituted with these regulations of 2022, PSPCL is required to withdraw the Petition and in its place draft the procedure and agreement as envisaged in the draft regulations after these regulations are finalized and notified.
- (iii) There are many sugar mills, paper mills, Distilleries and edible oil refineries etc which have set up Cogeneration plants in the state. Though all of them meet the criteria of Co-generation efficiency, many of them also

meet the requirements of Captive power plants as per Electricity Rules 2005. Such Captive cum Cogeneration plants also need to be covered under the CPP/CGP regulations.

- (iv) It is also evident that definition of cogeneration is provided at Regulation 2(g) but there is no reference to or provision regarding cogeneration or cogeneration plants in the subsequent paras. It is requested that separate Regulations be framed for Cogeneration plants so that such co generation is also promoted in the state in line with Section 86(1) (e) of the EA 2003. Further, the Verifying Authority/Agency defined in Regulation 2(x) be also entrusted with verification of Cogeneration cycle efficiency for grant of status of cogeneration plants.

#### **PSPCL's Response**

- (i) The draft PSERC (Harnessing of Captive Power Generation) Regulation, 2022 shall be applicable to all CGPs (whether NRSE/Renewable or Non-renewable) as defined in section 2(8) read with section 9 of the Electricity Act, 2003 connected to the intra-state transmission and/or distribution system of the State and fulfilling the criteria prescribed in Rule 3 of the Electricity Rules 2005, as amended from time to time, while NRSE Policy 2012 is only applicable to NRSE/Renewable projects in the state. These regulations do not cover the CPPs located within the consumer premises or transferring power through dedicated lines erected at its cost (which are not connected with Intra State Transmission/Distribution System).
- (ii) The said petition has already been filed in line with the provisions of PSERC (Harnessing of Captive Power Generation) Regulation, 2009 (Regulation-11 last para). Therefore, there is no need to withdraw the petition.
- (iii) The draft PSERC (Harnessing of Captive Power Generation) Regulation, 2022 shall be applicable to all CGPs (whether NRSE/Renewable or Non-renewable) as defined in section 2(8)

read with section 9 of the Electricity Act, 2003 connected to the intra-state transmission and/or distribution system of the State and fulfilling the criteria prescribed in Rule 3 of the Electricity Rules 2005, as amended from time to time. PEDDA may approach Hon'ble PSERC separately for issue of separate Regulation/Directions for promoting Co-generation non-captive plants.

- (iv) Captive user, who wants to install Solar CPP for 100% self-use (where no sale or wheeling of power is involved), cannot be provided the facility of banking. Such consumers give undertaking to the effect that no power shall be exported to PSPCL system and install Reverse Power-Flow Relay for the same. Further, the Petition for approval of competent authority to grant Captive status to Captive Power Plants in regard to Electricity Rules, 2005 has been already filed by PSPCL with the Hon'ble PSERC.

#### **Commission's Findings and Order**

- (i) As per section 181 of the Act, the regulations are required to be in line with the provisions of the Act and the Rules. However, State Government Policies are also kept in view.
- (ii) PSPCL, as per clause (viii) of Regulation 11 of these regulations, is required to prepare a detailed procedure for banking along with model banking agreement within a month of the notification of these regulations and get it approved from the Commission. The terms and conditions for banking has to be in accordance with the provisions of these regulations.
- (iii)&(iv) The co-generation plants fulfilling the conditions of CGP as per the provisions of the Act and the Rules are also covered in these regulations. The verifying authority/agency under these regulations are only for collecting and verifying the data to check the captive status of a CGP.

### **3. Regulation 2: Definitions**

#### **Comments Received**



## **Objection 6**

- (i) The objector suggested that the definition of Standby power may be amended as under;

*"Standby power" means the power required in case of planned or forced outage of the CGP."*

- (ii) The objector suggested that the "Verifying Authority/Agency" may be defined as under;

*Verifying Authority/Agency" means the authority/agency authorized by the Commission to verify the data to check the captive status of the Captive Generating Plant as per the provisions of Section 9 of the Act read with Rule 3 of the Electricity Rules, 2005, as amended from time to time, in accordance with the procedure/guidelines approved by the Commission. However, for the plants located outside the State, the designated authority of that State, granting captive status shall be acceptable.*

### **Commission's Findings and Order**

- (i) The definition, as suggested, has been amended.
- (ii) The guidelines for Verifying Authority/Agency shall be decided while approving the procedure/guidelines in Petition No. 47 of 2022 filed by PSPCL.

## **4. Regulation 3: Applicability**

### **Comments Received**

#### **(a) Objection 1**

The captive power projects shall be allowed without load limitation as per Green Open Access Rules 2022.

#### **(b) Objections 2 & 4**

If there is no technical problem in giving connections under both regulations, the same should not be denied.

Net Metering or Net Billing or Gross Metering under PSERC (Grid Interactive Rooftop Solar Photo Voltaic Systems) Regulations, 2021

should be allowed for captive open access users who wheel power exclusively from captive renewable energy based power plants.

**(c) Objection 5**

Solar roof top plants set up by the embedded consumers under Net Metering or Net Billing or Gross Metering shall also be captive plants by definition as whole of the power is consumed by the consumer, who also bears the full cost of such plant and thus meets with the requirement of Rule 3 of the ER 2005. Therefore, the wording needs to be reworded as under:

*Provided that the captive user, who is a consumer of distribution licensee and is availing Net Metering or Net Billing or Gross Metering arrangement under PSERC (Grid Interactive Rooftop Solar Photo Voltaic Systems) Regulations, 2021 in his premises shall not be eligible to be covered under these Regulations.*

**(d) Objection 7**

The existing projects set up under net metering/net billing regulations need to be allowed to opt for CPP status under 2022 regulations.

**PSPCL's Response**

- (a) The intent for captive plant is to basically meet its captive demand and under normal circumstances, the plant should not have to bank the energy with the Licensee. PSPCL is already surplus in power during most parts of the year and the obligation of providing facility of banking of power will put additional financial burden on PSPCL and as a result on the consumers in the State of Punjab.
- (b) to (d) A single eligible consumer of Licensee cannot be permitted to install part capacity under Net-metering/ Net-billing Regulations and part capacity under CPP Mode as the DC capacity installed under one regulation/ billing arrangement can't be allowed to be used for another mechanism as the load of the consumer shall be single/common being single eligible consumer. The consumers who set up plants under net-metering/ net-billing or gross metering arrangement, cannot be termed as captive user



as the same are governed by PSERC Rooftop Regulations and under the said regulations, it is not mandatory for the prosumers to consume at least 51% of the power generated. Moreover, under Gross-metering, the prosumers doesn't consume the power generated at all.

### **Commission's Findings and Order**

(a) As per section 9 of the Act, any person can set up a CGP and there is no capacity limit. As per Rule 4(2)(A) of the Green Energy Open Access (GEOA) Rules, there is no capacity limit for setting up plant from RE sources by a consumer for own consumption. However, the wheeling of power through Open Access shall be governed by Open Access Regulations.

(b to d) The Commission agrees with the comments of PSPCL.

### **5. Regulation 4. Terms and Conditions for operating CGP**

#### **Comments Received**

#### **(i) Regulation 4(1)**

#### **Objection 2**

The solar power plant capacity should not be tied up with manufacturing unit contract demand and must be allowed beyond contract demand of the unit.

Electricity (Promoting Renewable Energy Through Green Open Access) Rules 2022, para 4.2.A. *“Own Generation from renewable energy sources.–There shall not be any capacity limit for installation of power plants from renewable energy sources, by entities for their own consumption and such plants may be set up at any location in India and power shall be transmitted by using open access”*

The Electricity (Promoting Renewable Energy through Green Open Access) Rules, 2022 in para 5(2) provides that there shall not be any limit on supply of power for the captive consumers taking power under Green Open Access. Therefore, there should not be any restricting in this regard.

it should be clearly provided in the regulations that renewable power based CPP can be setup anywhere in India and power can be drawn through open access to manufacturing unit/units in Punjab with identical state related open access charges.

### **Commission's Findings and Order**

As per section 9 of the Act any person can set up a CGP and there is no capacity limit. As per Rule 4(2)(A), there is no capacity limit for setting up plant from RE sources by a consumer for own consumption. However, the wheeling of power through Open Access shall be governed by OA Regulations.

The first proviso to Rule 5(2) reads as under;

*Provided that only consumers who have contracted demand or sanctioned load of hundred kW and above shall be eligible to take power through Green Energy Open Access and there shall be no limit of supply of power for the captive consumers taking power under Green Energy Open Access:*

The limit as per first proviso to Rule 5(2) is with respect to eligibility for availing Green power Open Access which in case of non-captive consumer is 100 kW whereas there is no such load/demand limit in case of Green Power OA consumers taking power under GEOA. The transmission and wheeling of power through open access shall be governed by the provisions of Open Access Regulations.

#### **(ii) Regulation 4(3)**

##### **Objection 5**

Regulation 4(3) of the Draft provides for open access to a CGP/Consumer subject to adequate capacity of the transmission/distribution system indicating that the CGP is eligible for only short term open access and augmentation of capacity for connectivity is not provided herein. However, the CGP can seek medium or long term open access also and can seek connectivity with the system. In fact, Chapter 2 of the PSERC (Terms and Conditions for Intra-state Open Access) Regulations, 2011 provides in detail the eligibility

conditions and procedure for providing connectivity to an open access customer/generator and the same conditions will be applicable on CGP/Captive consumers. In fact for connectivity, reference of Chapter 2 of OA regulations need to be given here.

### **Commission's Findings and Order**

The clause (1) to (3) of Regulation 4 is as per Section 9 of the Act. Whereas reference to OA regulations regarding conditions of connectivity is concerned, the same has been added in clause (3) of Regulation 4.

#### **(iii) Regulation 4(5)**

##### **(a) Objection 5**

Regulation 4(5) of the draft provides a period of 15 days to the STU/Discom to convey approval of the connectivity whereas Regulation 6(2) of OA Regulations provides this period as 60 days.

##### **(b) Objection 6**

The objector suggested that provision may added that in case of captive user, who wants to install Solar CPP (where no sale of power is involved), PSPCL shall give Consent/Sanction/NoC for Installation and operation of CPP/NRSE Plant in parallel with the grid/PSPCL system and the consumer shall submit the requisite documents/undertakings and take approvals as prescribed by the licensee along with payment of one time permission fee. Further, the objector listed out the documents which a consumer shall submit for issuance of NoC.

### **Commission's Findings and Order**

(a) To remove any ambiguity the clause (5) of regulation 4 has been amended.

(b) It has been provided in clause (5) of Regulation 5 [renumbered as clause(3)] that *".....A CGP seeking connectivity and operation in synchronism with the grid, shall register with the distribution licensee by submitting the documents, as prescribed by the licensee....."*. Thus there is no need to list out the documents required to be submitted by the CGP



in the Regulations. Further it has been added that it shall be the responsibility of the CGP owner to obtain necessary clearances and approvals from competent authorities while seeking connectivity and operation in synchronism with the grid.

**(iv) Regulation 4(7)**

**Objection 5**

The last sentence in Regulation 4(7) of the draft i.e. "and for achieving the maximum economy of the operation of power system." need to be deleted as this will give powers to SLDC to curtail injection of power by a CGP at its whims and fancies by just declaring that injection of power is increasing the T&D losses of the Licensee and thus uneconomical.

**Commission's Findings and Order**

The clause is reproduction of section 33(1) of the Act and the apprehension of the objector is misplaced.

**(v) Regulation 4(10)**

**Objection 5**

The quantum of 5 MW for the purpose of DSM settlement will be the quantum for the sale of power to Discom or power to be wheeled under open access and not the installed capacity of CGP. CGP capacity cannot be taken as base line as the grid is utilized only for the power injected for sale or open access which will always be less than 49% of the CGP and connectivity at higher voltage will put undue burden on the CGP.

**PSPCL's Response**

As per the provisions of PSERC(Forecasting, Scheduling, Deviation Settlement and Related Matters of Solar and Wind Generation Sources) Regulations, 2019 and PSERC (Deviation Settlement Mechanism and related matters) Regulations, 2020, the eligibility criteria for generators/sellers (including CGPs) is based on the installed capacity (for Solar Generators with individual/combined capacity of pooling stations 5 MW & above and Non-Solar RE Generators above 5 MW) instead of Open

Access Quantum. In case, stake holders wishes to get the aforesaid eligibility criteria changed, a separate petition may be filed for amendment of concerned regulations.

### **Commission's Findings and Order**

The clause is as per the provisions of PSERC (Deviation Settlement Mechanism and related matters) Regulations, 2020 and PSERC (Forecasting, Scheduling, Deviation Settlement and Related Matters of Solar and Wind Generation Sources) Regulations, 2019. Both these regulations have been finalised after following laid down procedure.

**(vi) Regulation 4(11)**

**(a) Objection 2**

**Twenty six percent share in ownership**

For this purpose, the CPP is set up as a part of the company then a legal undertaking in this regard would be sufficient.

If CPP has more than one owners and is a separate company than unit/units drawing power from it, the capital structure of the CPP/or part of renewable power generating station, which is declared as CPP and share of different owners in its equity be provided by CPP owners on legal undertaking yearly. In case, there is any change in it during the year, without delay same should be communicated to PSPCL but not later than 3 months. To show 51% share in power generated on annual basis is self-consumption. To promote the ease of doing business in energy sector in Punjab, such information may be taken from Discom own records.

**For CPP away from user/manufacturing unit**

Power generated and injected in the Grid is available at ABT meter. Power drawl by consumer at other end is also available with unit's meter. If second is more than 51% of first (consumption as percentage of generation), it is proof of 51% or more power consumption for self-use of total generation.

**(b) Objection 6**

The objector suggested that following proviso may be added;

*Provided that above conditions shall not be applicable where a captive user installs Solar CPP for 100% self-use (where no sale of power is involved) may please be added.*

**Commission's Findings and Order**

- (a) The requirements for CGPs to fulfill conditions of Rule 3 of the Electricity Rules 2005 and other related matters shall be specified in the detailed procedure for verification of captive status to be approved separately by the Commission.
- (b) As per Rule 3 of the Electricity Rules 2005, a generating plant shall qualify as a CGP only if it fulfils the conditions mentioned in the Rules and reproduced in this clause. So it is the discretion of the generator to avail the status of CGP or not.

**(vii) Regulation 4(14)**

**Objection 6**

In case the verifying agency/authority observes non-compliance of the conditions prescribed under Rule 3 of the Electricity Rules 2005 for captive status during a financial year then the Distribution Licensee may be authorized to recover the applicable charges (Cross Subsidy Surcharge & Additional Surcharge) for safeguarding the interests of Distribution Licensee.

However, in case of any dispute, the captive user(s) is/are at liberty to approach the Commission through a petition for adjudication in accordance with the procedure approved by the Commission.

**Commission's Findings and Order**

As per the orders of Hon'ble APTEL dated 07.06.2021 in A.No 131 of 2020, DISCOM is not competent to decide and impose any penalty or to take punitive action in case the agency/authority empowered to collect & verify the status observes that a CGP fails to fulfil the conditions



prescribed for captive status. A DISCOM may be carrying out the task for collecting and verifying the data on behalf of the Commission and accordingly has to report the findings to the Commission, who is the competent authority to take action. The relevant para 10.18 of the APTEL Order is reproduced below;

*“10.18 Thus, we are unable to accept the contentions of the Respondents on this issue and set aside the directions of TNERC contained in paragraphs 6.1.4 to 6.1.6 and 7.9.6 to 7.9.10 in the impugned order. However, we hold that Respondent No. 2 can be appointed for undertaking an exercise of collecting and verifying data for the purpose of verification of captive generating plant status in the State of Tamil Nadu, without the powers to itself take any coercive action against any CGP/Captive User(s). It is clarified that any action to be initiated against the CGP/Captive User(s) regarding its captive status or for recovery of CSS, as per law, needs to be done through appropriate proceeding initiated before the Respondent No.1.”*

However to safeguard the interests of distribution company and other consumers of the state, a suitable security mechanism may be incorporated in the detailed procedure.

**(viii) New Clause (16)**

The objector 6 suggested that following clause may be added;

*In case of Solar CPP (where no sale of power is involved), the AC capacity of inverter/Peak DC capacity of the generating plant should not be more than the sanctioned load/contract demand of the consumer.*

**Commission’s Findings and Order**

Refer to the Findings and order of the Commission against Sr. No. 4(a) of this order.

**6. Regulation 5.1: Sale of Firm Power**

**Objection 5**

RE based CGPs shall have to register themselves with PEDDA under the NRSE Policy 2012.

## **PSPCL's response**

As per CEA Notification No. CEA-PL-15-13(11)/1/ 2020-PSLF dated 09.11.2020, all power generating units having installed capacity of 0.5MW or above are required to register themselves with CEA on e-portal <https://egen.cea.gov.in>.

## **Commission's Findings and Order**

The regulations are in line with Rules and the provisions of the Act. CGP interested to avail benefits under NRSE policy may fulfill the requirements of the policy. As per clause (4) of Regulation 4, it shall be the responsibility of the CGP owner to obtain necessary clearances and approvals from competent authorities while seeking connectivity and operation in synchronism with the grid.

### **7. Regulation 5.1.1: By a RE based CGP**

#### **Objection 5**

- (i) There is need to make provision for purchase of RE power generated through Biomass as fuel for which tariff should be significantly higher than that of solar projects. This is required to ensure usage of the Rice straw and other agro wastes available in plenty in the state which is causing pollution and health hazards for the public. Even National Green Tribunal is also pressing for proper disposal of the rice straw. It is suggested that at least 100 MW capacity be allocated every year for next 5 years to PEDDA for development of CPP/Cogen projects by industry using mainly Rice straw with sale of surplus power to PSPCL at the APPC with issue of RECs to such captive generators. The medium term PPAs of 10 years duration can be executed with such CGPs to cover debt repayment period.
- (ii) As per Regulation 4(2) of CERC (Terms and Conditions for Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2022, RE Generating Station selling full or part power to Discom is entitled to get RECs if the tariff is not determined under Section 62 or 63 of the EA 2003. Thus CGP will be and eligible entity and entitled to get RECs and therefore power will not count towards RPO of DISCOM.

## **PSPCL's response**

- (i) The draft PSERC (Harnessing of Captive Power Generation) Regulation, 2022 shall be applicable to all CGPs (whether NRSE/Renewable or Non-renewable) as defined in section 2(8) read with section 9 of the Electricity Act, 2003 connected to the intra-state transmission and/or distribution system of the State and fulfilling the criteria prescribed in Rule 3 of the Electricity Rules 2005, as amended from time to time. PEDDA may approach Hon'ble PSERC separately for issue of separate Regulation/Directions for promoting RE power generated through Bio mass/Rice Straw as fuel.
- (ii) Since as OA regulations, the generating station is availing the benefit of concessional transmission charges so the generator is not eligible for issuance Certificates as per CERC regulations. As such the surplus power purchased by the Distribution Licensee from RE based CGP may be counted towards the RPO of Distribution Licensee.

## **Commission's Findings and Order**

- (i) The Regulation is for sale of surplus power by CGP to distribution licensee. For sale of power, generator is free to enter into agreement with distribution licensee as per the provisions of the Act /Rules read with Power Purchase Regulations and Orders of the Commission.
- (ii) The issue of REC and RPO shall be governed by the provisions of relevant regulations.

## **8. Regulation 5.1.2: By a conventional fuel based CGP**

### **Objection 5**

PSPCL is purchasing power through power exchange or by inviting bids for purchase of short term power during paddy season i.e. 10th of June to 15th of October every year. In this purchase, PSPCL is additionally bearing the open access charges and losses etc of interstate transmission system. Punjab based CGPs (Captive and cogeneration plants based on RE Technologies) also have surplus capacity during the period which can be purchased by PSPCL on the average of accepted bid rates for



purchase of short term power by PSPCL subject to ceiling of APPC. This will make available cheap and competitive power at 11 KV or 66 KV to PSPCL and also increase usage of biomass wastes besides creating employment opportunities. Provision needs to be made for the same in the CPP regulations.

### **PSPCL's Response**

It has been observed that power offered by CPPs mentioned therein is infirm and unreliable, whereas PSPCL finalizes its arrangements well in advance for meeting its peak demand. So dependency of PSPCL on smaller quantum and uncertain availability (due to fuel availability issues) of CPPs is not feasible.

### **Commission's Findings and Order**

Any power purchase has to be in accordance with the provisions of the Act read with relevant regulations, guidelines framed by Central Government and orders of the Commission.

#### **9. Regulation 5.2: Sale of Infirm Power**

##### **(a) Objection 2**

The solar/wind based CPP may require infirm power at times and same should be provided without any financial loss to Discom at normal power tariff rates with a proviso that the drawl being on a few occasions only, Fixed Charges for such drawl also need to be exempted

##### **(b) Objection 4**

In line with regulations in other states of the country, compensation for infirm power from Renewable Energy based captive power plants should be fixed at 90% of weighted average of the renewable energy tariffs discovered through Competitive Bidding for renewable energy power projects and as approved by the Commission for the previous financial year.

##### **(c) Objection 5**

Such infirm power injected but not paid for will not be shown in the state energy account and thus will be used by PSPCL for lowering its T&D

losses. Further, PSPCL will earn as per UI settlement account since the energy has been injected to PSPCL system. Equity and justice demands that infirm power injected into the grid be paid for at the minimum rate of purchase of power by PSPCL from all sources or at feed in tariff decided by the Commission for each year.

### **PSPCL's Response**

#### **(b & c)**

It is also submitted that as per various regulations issued by PSERC and CERC from time to time, the permission/ concurrence/NOC of SLDC or Distribution Licensee is required before injection of infirm power by a generating plant into the Intra State Transmission System or Distribution System, as the case may be. The infirm power injected into the Grid without the permission/ concurrence/NOC of SLDC or Distribution Licensee needs to be considered as unauthorized injection & dumped accordingly.

Further, as per the provisions of CERC (Deviation Settlement Mechanism and related matters) Regulations, 2022, the deviation charges for any infirm energy injected into the system shall be zero and as such no change in Regulation is required.

Provisions of sale of RE Power at the rate equal to the weighted average of the solar tariffs discovered through Competitive Bidding for solar power projects and as approved by the Commission for the previous Financial Year has already been provided in the regulation. Any infirm power injected into the grid by RE CPP without any agreement (where no sale or wheeling of power is involved) should only be treated as dumped power.

### **Commission's Findings and Order**

- (a) Provision for availing Standby or Start up power by CGP has already been made in the Regulations.
- (b&c) Power injected in to the grid by a CGP without any contract with the distribution licensee cannot be compensated by the licensee. The infirm power injected in to the grid by a generator during testing before

commercial operation of the plant shall be governed by the provisions of PSERC (Deviation Settlement Mechanism and related matters) Regulations, 2020 and accordingly the regulation has been amended.

**10. Regulation 6: Sale to a Third Party**

**(a) Objection 4**

A mechanism for sale of power to the distribution licensee is already established. It is suggested that exemption from the first right of refusal should be allowed for renewable energy based captive generators in order to promote competitiveness & ease of adoption of renewable energy in the state.

**(b) Objection 5**

Sale to a third party will be feasible only if CGPs set up in the state are exempted from Regulation 28(3) of the Open Access Regulations. Further, first right of refusal of purchase of power by PSPCL provided herein should be conditional that CGP should not be compelled to sell power at rates defined in Regulation 5.1.

**PSPCL's response**

- (a) The provision of having first right of refusal with Distribution Licensee also exists in NRSE Policy, 2012 and the same needs to be retained.
- (b) Please refer to general comments against objection 2 & 2A.

**Commission's Findings and Order**

- (a) The Commission notes the concern of the objectors regarding the first right of refusal given to the distribution company for sale of surplus power in the draft notification particularly in view of capping of price in these regulations. As per the provisions of the Act, CGP is empowered to sell the surplus power either to the distribution company and/or to third party. Accordingly, the proviso to Regulation 6 has been deleted.
- (b) Regulation 28(3) is not a part of present proceedings of CGP Regulations. The matter shall be dealt with separately. As stated above, the proviso to Regulation 6 has been deleted.



**11. Regulation 7: Standby and Startup Power**

**Objection 4**

For renewable energy based captive generators, auxiliary power for running loads during non-generating hours should not be considered as standby power and a separate provision should be made where energy drawn (kWh) can be charged at tariff applicable to Large Supply (General). Since the quantum of drawl will be negligible, fixed charges (kVA) should not be made applicable to Renewable Energy based captive generators.

**PSPCL's response**

The Captive Generators have option to avail consumer connection from PSPCL for auxiliary power for running loads which shall be billed at applicable tariff as determined by Hon'ble PSERC. In case of unavailability of such consumer connection, the auxiliary power drawn by the CGP shall be considered as startup/standby power and billed accordingly.

**Commission's Findings and Order**

As per Regulation 7.2, a CGP can avail Start up power for pre-commissioning of the plant or for planned/forced outages. Alternatively, CGP can obtain a separate connection as consumer of the distribution licensee, as permissible under law.

**(12) Regulation 7.1.1: Standby Power**

**(a) Objection 3**

Regulation 7.1.1 allowing standby power for only 42 days in a year with counting of drawl of power for even one 30 minutes' time block in a day as a full day for the purpose of this Regulation needs amendment as it is not possible for CGPs to pay penalty of Rs 750 per KVA per month beyond 42 days for CGPs. Even the CERC RE Tariff Regulations provide the PLF of biomass plants as 80% i.e plant closure of 20% is considered which works out as  $365 \times 20\% = 73$  days' total closure in year on hourly basis. Due to penalty and generation of electricity being not a core business of the

industry and risks involved with biomass fuels, we request that this period may please be specified as 2000 hours/year.

**(b) Objection 5**

Availability of standby power for only 42 days in a year with counting of drawl even for one time block in a day as full day is too severe for renewable energy based plants. As per our knowledge, no CGP based on renewable energy is availing standby power in Punjab due to this specific provision. The actual average PLF of biomass based IPPs is between 50 to 65%. For bagasse based CGPs, it is around 50%. As such this 42 days period of making available standby power for RE based CGPs need to be dispensed with straight away or increased to at least 200 days. Further, it needs to be specifically provided that the duration of time block for availing standby/start up power will be 30 minutes.

**(c) Objection 7**

This Regulation needs to be liberalized as no CPP will take the liability of penalty of Rs 750 per KVA per month beyond 42 days i.e requiring around 90 to 95% PLF of the project in a year. In view of the financial distress of such industries, this period needs to be extended to at least 100 days/year.

**PSPCL's Response**

(a & c) Hon'ble PSERC in Petition No. 16 of 2018 after careful consideration of the submissions made in the Petition, additional submissions, objections/comments received in response to the Public Notice as well as during the public hearing and replies of PSPCL/PSTCL, has incorporated suitable provisions for 'Standby Charges' and 'Other Charges' as Regulations 27(A) and 27(B) respectively of the PSERC OA Regulations.

There may be instances when no power is wheeled/scheduled on account of outage/ shutdown of the generator or due to some interruption in distribution system of the CPPs or in other transmission line or grid. In that eventuality the CPPs would take electricity from the petitioner and for that situation the PSPCL is entitled to recover stand by charges as PSPCL has

universal obligation for supply of electricity. Even, Forum of Regulators in Model Open Access Regulations, 2010 has stipulated that standby arrangements should be provided by the distribution licensee for a maximum period of 42 days in a year. Similar provisions also exist in the other states such as Gujarat, Rajasthan and Delhi.

Further, the plant closure/outages can be worked out based on Plant Availability Factor instead of Plant Load Factor (PLF). As the plant availability factor of generators generally ranges between 85 to 90%, the forced/planned outages are generally in the range of 10 to 15%. The maximum period of 42 days in a year covers upto 11.5% outage. As such, allowing drawal of Standby power for more than the aforesaid period shall not be realistic/viable.

### **Commission's Findings and Order**

The Commission has examined the issue and decides that for RE based CGP, an option may be allowed to the generators to avail Standby power upto 80 days with payment of specified commitment charges. It has also been clarified that in case recorded drawal exceeds the Standby Contract demand then demand surcharge on daily basis as per condition 23 of the General Conditions of Tariff shall be applicable to CGP. The regulation has been amended accordingly.

#### **13. Regulation 8: Metering**

##### **(a) Objection 3**

Regarding Regulation 8 (Metering) we submit that in case of CPPs located with in the consumer premises, Bi-directional TOD Trivector meters with separate export and import registers similar to the meters being provided for solar roof top net metering will serve the purpose as the captive user will be consumer of PSPCL as well and provided accordingly.

##### **(b) Objection 4**

In case of unavailability of space at the grid substation to install the SEM, installation of the same in the Captive power plant's premises should be permitted.



**(c) Objection 5**

The metering clause needs to cover all the categories of CGP and Captive users unambiguously. There are following categories:

- i) CGP is owned by the captive consumer and co-located with captive load in the same premises.
- ii) CGP is owned by consumer and power is transferred through dedicated transmission line erected by the CGP/Captive consumer at its cost.
- iii) Captive consumer consumes more than 51% of generation of CGP and balance is sold to PSPCL
- iv) Captive consumer consumes more than 51% of generation of CGP and balance is sold to third parties thro' open access.
- v) CGP and Captive consumer located at different places and transfer of power is through open access.
- vi) CGP is availing banking facility with or without open access.

As per CEA metering regulations, ABT Metering with 15 minute recording is required at interface points where power is sold to PSPCL or transferred through open access. However, where start up power / standby power is to be availed from PSPCL for which bills are to be raised by the PSPCL, Consumer meters with recording of 30 minute time block are required to be provided by the Licensee. The Draft Regulation also refers to the CEA metering regulations for the same. Therefore the para may be redrafted to give clarity.

**(d) Objection 6**

Provision for Captive user, who wants to install Solar CPP (where no sale of power is involved) suitable electronic energy Meter(s) shall be installed on HT Side for Energy Accounting/Billing and at LT side (inverter output terminals) for recording units generated/energy audit/RPO Compliance may please be incorporated.

Such consumers shall also be required to install Reverse Power-Flow Relay so that no power is exported to PSPCL grid may also be added, please.

## **Commission's Findings and Order**

As per section 55 of the Act, Central Electricity Authority (CEA) has been empowered to frame Regulations for installation of meters. Accordingly CEA has notified the CEA (Installation and Operation of Meters) Regulations, 2006, as amended from time to time. The installation of all meters shall have to conform to the provisions of CEA Metering Regulations.

### **14. Regulation 9: Forecasting, Scheduling, Energy Accounting and Deviation Settlement**

#### **(a) Objection 4**

Energy accounting should be carried out at the end of each month at an aggregate level where total injection less transmission & wheeling losses from the renewable energy based captive power plant is adjusted against the drawl at the consumption point every month. In case drawl is greater than injection, the same should be charged at the applicable tariff and in case injection is greater than drawl, the excess energy should be banked.

#### **(b) Objection 5**

The scheduling shall not be applicable to CGPs co-located in the same premises and those CGPs which transfer power to captive consumer through dedicated line as in such case there is no injection to transmission/distribution system. Such CGPs also need to be covered and provision for banking without open access to such plants need to be made.

### **PSPCL's Response**

- (a) As per Draft PSERC (Harnessing of Captive Power Generation) Regulation, 2022, the energy accounting of all banking transactions shall be done by SLDC. As such, the accounting of procedure stipulated by SLDC read along with the Terms and conditions and banking agreement approved by Hon'ble PSERC in Petition No. 29 of 2022.
- (b) The Co-generation plants are not eligible for banking facility in terms of draft PSERC (Harnessing Captive Generation Regulation) 2022, the

provisions of which are applicable only in case of open access, where the open access user pays the transmission and wheeling charges and other charges to take care of the network charges and other losses of PSPCL. The generator can inject power into the transmission/distribution system in two cases i.e. either through open access (for sale/wheeling for captive use) or by executing PPA with Distribution Licensee. Banking is the process under which a captive generating station supplies power to the grid not with the intention of selling it either to a third party or to a licensee, but with the intention of exercising his eligibility to draw back this power from the grid for its own use.

- (c) The scheduling for Captive user, who wants to install Solar CPP for 100% self-use (where no sale or wheeling of power is involved), may not be applicable but such consumer cannot be provided the facility of banking. Such consumers give undertaking to the effect that no power shall be exported to PSPCL system and install Reverse Power-Flow Relay for the same.

#### **Commission's Findings and Order**

- (a) The accounting in case of Banking shall be specified in the detailed procedure for banking to be separately approved by the Commission.
- (b) & (c) The scheduling shall be applicable as per the provisions of PSERC (Forecasting, Scheduling, Deviation Settlement and Related Matters of Solar and Wind Generation Sources) Regulations, 2019 or PSERC (Deviation Settlement Mechanism and related matters) Regulations, 2020, or OA regulations, as may be applicable.

The Regulation regarding banking has been amended and as per Regulation 11, the banking facility shall be available to Captive User getting power from renewable energy based CGPs connected to the intra-state transmission and/or distribution system of the licensee.

#### **15. Regulation 10: Billing**

- (a) **Objection 3**



The Admissible Drawl appearing in this clause is not applicable to CPPs located within their premises. Further the proviso of this clause is extracted as under: -

Provided further that the captive user shall not bear the applicable losses in case the captive consumption is carried out without using the distribution system and/or transmission system of licensee.

It is submitted here that a CGP located within the captive user's premises or transferring power through dedicated line erected at its cost with approval of the Hon'ble Commission is entitled to consume such captive power without paying any charges to Licensee including losses. The clause needs to be provided accordingly to clarify.

**(b) Objection 4**

Definition of Admissible drawal is not mentioned in the draft regulation. If the meaning of the same is to be inferred from clause 28.3 of the Punjab State Electricity Regulatory Commission (Terms and conditions for intra-state Open Access) Regulations, 2011, this would **make** setting up of renewable energy based captive power plants unviable.

Our Suggestion: In case a Captive user wheels power from a Renewable Energy based captive generation plant, the above statement should be modified to *"In case the captive user exceeds his sanctioned contract demand he shall also be liable to pay demand surcharge as applicable"*

**(c) Objection 5**

In line with the Policy provision the facility of banking needs to be extended to all renewable projects whether co-located or transferring power through dedicated transmission line under Regulation 4(1) or through PSPCL system under open access. Regulations may be provided accordingly. In view of this, the definition of banking and procedure of banking may be amended accordingly.

The reference to Admissible Drawl in 6<sup>th</sup> line of 2nd Para need to be deleted for RE Captive generators as it is not possible to operate the CGPs

transferring power through open access due to the restriction of regulation 28(3) of OA regulations.

Further the proviso of regulation 10 is confusing as in our view, a CGP co-located or transferring power through dedicated line is not required to pay any charges to Licensee whatsoever for consuming such captive power. As such either this proviso may be deleted or adequately reworded to clarify the issue.

### **PSPCL's Response**

(a) The draft Punjab State Electricity Regulatory Commission (Harnessing of Captive Power Generation) Regulations, 2022 are applicable to all CGPs connected with Intra State Transmission/Distribution System and fulfilling the criteria laid down for CGPs in Electricity Rules, 2005. These regulations do not cover the CPPs located within the consumer premises or transferring power through dedicated lines erected at its cost (which are not connected with Intra State Transmission/Distribution System).

(b) & (c)

It is also submitted that Hon'ble PSERC has sought comments/suggestions on Draft Harnessing Captive Generation Regulation. The suggestion needs to be taken separately as the Draft under consideration is for Harnessing of Captive Power Generation and any generator declared as CPP in terms of this Regulation is entitled to Open Access which is to be governed by Open Access Regulations.

Regarding Reg 28(3) please refer to general comments against objection 2 & 2A.

### **Commission's Findings and Order**

(a) The standalone CGPs not connected to intra-state transmission or distribution system are not covered under these regulations. However, admissible drawal shall be applicable in case CGP/captive user avail open access as per the provisions of Open Access Regulations. The second proviso to Regulation 10 has been deleted to avoid any ambiguity.

(b) The amendments in Open Access regulations are not a part of these proceedings and shall be dealt with separately.

- (c) The issue of banking has been discussed in para 16 of this order. The issues of admissible drawal and second proviso have already been discussed above.

**16. Regulation 11: Banking**

**(a) Objection 1**

The banking of power shall be allowed throughout the year on payment of banking charges as approved by the Commission. The banked energy shall be permitted to be carried forward on a month-to-month basis until the end of the financial year. The banking shall be allowed for all business models, such as captive/group captive/ third-party model. The banking should be prohibited during the peak seasonal period from 15th June to 30th September and also during peak load hours. The banking charge should not exceed 3% of the overall banked energy.

**(b) Objection 2**

The present policy of the Government of Punjab on New and Renewable Sources of Energy 2012 as well as PSERC Captive Power Plants Regulations allow banking of power with PSPCL. The draft regulations also provide for banking for solar power based CPP. However, as per PSERC Open Access Regulations, open access is not provided more than 90% of the contract demand of the unit importing power.

To use the facility of banking of renewable power available/generated during day time only, the energy generated has to be more than contract demand of the importing unit, which can be banked with PSPCL. The same can be drawn during night. However, if wheeling of power through open access is restricted up to 90% of contract demand, the importing unit would not be able to generate, wheel and bank surplus power, exceeding its contract demand, with PSPCL.

Therefore, it is submitted that renewable power based CPP should be exempted from the above Open Access Regulation and renewable power drawn from CPP should not be restricted to 90% of CD and should be without any upper cap in this regard for promoting Ease of Doing Business.



However, for practical purpose, the actual drawl of banked power from PSPCL would not be more than contract demand of the importing unit as beyond contract demand at any point of time, power could not be imported/taken from CPP/PSPCL without inviting penal demand surcharge and other penalties by PSPCL. Therefore generation and banking should not be restricted to contract demand.

In addition to above, there would be some more clauses of PSERC existing Open Access Regulations, which need to be amended in consonance with new PSERC (Harnessing of Captive Power Generation) 2022. We, therefore, request the Hon'ble Commission to kindly amend existing Open Access Regulations of PSERC along with formulation of new regulations PSERC (Harnessing of CPP Power) 2022 jointly and also seek experts views on the subject. This will ensure that that renewable power promotion especially through Captive power plant in the State become viable and open access regulations do not obstruct smooth working of renewable power based CPP.

The average purchase cost of short term power (Rs.3.50/unit) , availability of surrender power, lapsing of unused banked energy after end of financial year( about 30% of banked power in case of CPP equivalent to 100% of annual consumption) and RPO benefits to PSPCL must be factored for determining banking charges for banking facility given for renewable power based CPP. In above example, the power cost of banked power given back to manufacturing unit works out to be Rs.2.27 less RPO ( say 50 paisa) , net cost is Rs.2 or less than that. Adding T&D losses of 5-6% on 66 KVA system, the power cost works out to be about Rs.2.30-2.50/unit. Thus, there is no additional significant burden in present situation to PSPCL in giving banking facility to consumers of renewable power.

**(c) Objection 3**

The Draft regulations provide the definition of banking in para 2(b) which indicates that the facility is to be provided to only those captive consumers which avail transfer of power through open access. Thus the facility is to be provided to all those CGPs

- a) which use PSPCL/PSTCL grid system through open access.
- b) irrespective of whether these are conventional or non-conventional captive generating plants located away from the consumers' premises
- c) CGPs located within the premises or transferring power through dedicated feeder are not eligible for banking.
- d) CGPs using cogeneration process are also not eligible for banking facility.

We submit that the banking facility need to be extended to the CGPs using New and Renewable sources of Energy which meet with the criteria of CPPs as per rule 3 of Electricity Rules 2005 and are located within the premises of the consumer.

This will facilitate optimum usage of the renewable sources which is the need of the hour to minimize global warming and saving the environment.

PSPCL will get additional power from Captive plants located in the premises in the peak requirement period of paddy season which is to be returned to consumers in the winter season when the demand of PSPCL is substantially reduced and it is surplus in power. This will reduce the costly power purchase by PSPCL in the paddy season when the country also faces peak power requirement and even exchange rates are high.

It is also being observed that the rates of power at exchange are less during the day time and more during evening peak and night hours. Unlike solar plants which generate power only during day time, Biomass/Agro waste plants (like our paddy husk based plant) generate power round the clock and will be injecting power under banking during night time also in the paddy season which will be additional benefit to PSPCL.

Therefore, we request that all renewable energy based captive plants whether located away from the premises or with in the premises be allowed the banking facility under the regulations 2022.

The Regulations may also provide for the basis of fixation of Banking charges payable to PSPCL to ensure transparency. The benefits accruing to PSPCL also need to be kept in view while fixing such charges.

**(d) Objection 4**

- (i) Since the rationale for the above (clause ii) is premised solely on account of higher cost to be incurred by the distribution licensee, a commercial via-media should be considered so that if a captive consumer wants to draw banked energy during paddy season/peak load/ peak TOD. the differential cost of purchased power between peak hour & off-peak hour by the distribution company can be passed onto the captive consumer instead of disallowing drawl of banked power during this period.
- (ii) For Renewable Energy based captive generators, since there is a likelihood of surplus energy in the month of February and March, the same should be permitted to be utilised by the captive user upto 6 months from the end of the financial year, with the obligation on the distribution licensee to pay the captive generator for unutilised banked units at rates mentioned in point 3 above, as it would go towards meeting the distribution licensee's RPO obligations.

**(e) Objection 5**

- (i) The banked energy to be treated as infirm power needs to be paid as per Para 18 above. Further,
- (ii) The open access charges for the banked energy need to be levied when the banked energy is drawn by the captive consumer.
- (iii) The open access charges for banked energy need to be levied on the net quantum after deducting the quantum of banking charges.
- (iv) The co-located RE based CGPs and CGPs transferring power to captive consumer through dedicated line may also be allowed the banking facility on payment of banking charges.
- (v) The regulations may provide that energy retained by PSPCL towards banking charges received by PSPCL in kind will count towards RPO of discom.



(vi) Special dispensation for solar plants needs to be provided regarding capacity of the CGP so that banking facility is availed in real sense. If capacity of solar plants is limited to the CD of captive consumer, then there is no chance of any banking actually taking place

**(f) Objection 7**

The banking facility as envisaged in the Draft regulations for solar based CPPs transferring power under open access, be allowed to all power plants whether running on conventional or non-conventional sources and whether located away from the factory or within the factory. PSERC (Harnessing of Captive Power Generation) Regulations, 2009 covered all CPPs for banking under Regulation 8 and therefore Draft of 2022 also needs to cover all conventional and non-conventional CPPs and as such banking facility needs to be extended to all such plants.. Providing banking facility to only those solar CPP plants which are set up under open access mode is discriminatory and biased against other modes of generation.

**(g) Objection 6**

The banking of power shall be allowed throughout the year on payment of banking charges as approved by the Commission from time to time to compensate the distribution licensee for additional cost on this account along with other applicable charges.

Provided that the drawal of banked energy shall not be allowed during the peak seasonal period from 1st June to 30th September and also during peak load hours (for complete year), as may be declared by SLDC/RLDC. Further, Captive Solar Generators shall also ensure firm power for at least 12 Hours by making suitable Battery Energy Storage System arrangements.

**PSPCL's Response**

(a) Hon'ble Tribunal in Appeal No. 231 & 233 of 2006 has held that banking is a commercial arrangement and has to be worked out by the parties keeping in view their respective commercial interests.

In the Petition No. 29 of 2022 regarding approval of terms and conditions for banking of power is already submitted by PSPCL to Hon'ble PSERC.

The drawl of banked energy shall not be allowed during the peak seasonal period from 1st June to 30 September and also during the peak load hours (for complete year), as may be declared by SLDC/RLDC.

- (b) The intent for captive plant is to basically meet its captive demand and under normal circumstances, the plant should not have to bank the energy with the Licensees. It is further submitted that the open access has been restricted upto sanctioned Contract Demand (considering 0.90 Power factor for conversion from MVA to MW) which has been approved by Hon'ble PSERC in Procedures for Open Access.

Haryana Electricity Regulatory Commission (Terms and conditions for determination of Tariff from Renewable Energy Sources, Renewable Purchase Obligation and Renewable Energy Certificate) Regulation, 2021 and amended from time to time has also specified that RE based Captive Generating Plants may avail open access/bank power upto Contract Demand for Captive/own use and banked energy not drawn as per schedule, shall be considered as dumped energy & shall lapse.

It is not intended by the Policy that excessive capacity should be built by the captive consumer over and above its contract demand so as to use banking facility to adjust over generation due to oversized generation plant against contract demand with PSPCL. As such, the banking/open access should be restricted to sanctioned Contract Demand of the consumer.

The suggestion/seeking amendment to Open Access Regulations (Regulation 28(3)) in order to facilitate CPPs be taken separately as the Draft under consideration is for Harnessing of Captive Power Generation and any generator declared as CPP in terms of this regulation is entitled to Open Access which is to be governed by Open Access Regulations in vogue.

- (c) The Co-generation plants are not eligible for banking facility in terms of draft PSERC (Harnessing of Captive Generation Regulation) 2022, the provisions of which are applicable only in case of open access, where the open access user pays the transmission and wheeling charges and other charges to take care of the network charges and other losses of PSPCL.

The generator can inject power into the transmission/ distribution system in two cases i.e. either through open access (for sale/wheeling for captive use) or by executing PPA with Distribution Licensee. Banking is the process under which a captive generating station supplies power to the grid not with the intention of selling it either to a third party or to a licensee, but with the intention of exercising his eligibility to draw back this power from the grid for its own use.

PSPCL has already filed a Petition No. 29 of 2022 regarding terms and conditions for banking of power to Solar CPPs to PSERC. PSPCL is already surplus in power during most parts of the year and the obligation of providing facility of banking of power will put additional financial burden on PSPCL and as a result on the consumers in the State of Punjab.

It is further submitted that the facility of banking is merely a facility of purchasing power from the Distribution Company at a concessional price. It is entirely a commercial arrangement and has to be worked out by the parties keeping in view of their respective commercial interests. The National Tariff Policy also does not provide for banking. Hon'ble PSERC vide its order dated 4.5.2022 in Petition No. 53 of 2021 has also decided that neither PSERC (Harnessing of Captive Power Generation) Regulations, 2009 read with NRSE Policy, 2016 nor section 86(1) (e) of the Act bestow any right on the petitioner (Ms KRBL Ltd.) to claim banking facility for its in-situ captive power plant from the distribution licensee particularly if such arrangement is not commercially viable for the licensee.

- (d) During the paddy season/peak load hours, State of Punjab is deficit and meeting the ever-increasing demand by purchase of costly power. As such, it is not viable to allow drawl of banked power during such period as also being done by other states e.g. Haryana, Maharashtra, Assam etc. As such, the drawl of banked energy shall not be allowed during the peak seasonal period from 1st June to 30 September and also during the peak load hours (for complete year), as may be declared by SLDC. This is also as per the NRSE Policy 2012.



The draft Regulation is in line with the Green Open Access Rules 2022 notified by the Ministry of Power, GOI. These rules have been notified for promoting generation, purchase and consumption of green energy, while the intent of the draft Regulation is also to promote consumption of green energy. Hence, the draft Regulation need not be amended.

- (e) (i) The draft Punjab State Electricity Regulatory Commission (Harnessing of Captive Power Generation) Regulations, 2022 are applicable to all CGPs connected with Intra State Transmission/Distribution System and fulfilling the criteria laid down for CGPs in Electricity Rules, 2005.

Any sort of infirm power injected into the grid cannot be paid by the distribution licensee and can only be treated as dumped power.

- (ii)&(iii) The banking charges shall be decided by Hon'ble PSERC. However, PSPCL has already filed Petition No. 29 of 2022 regarding procedure/terms and conditions for banking of power to CPPs before PSERC along with draft banking agreement, which is pending before Hon'ble PSERC. The said petition has already been filed in line with the provisions of PSERC (Harnessing of Captive Power Generation) Regulation, 2009.

As far as open access charges are concerned, these have also been already been mandated in the PSERC (Terms and Conditions of Intra State Open Access) Regulations amended from time to time.

- (iv) Comments of PSPCL against Regulation 10 in para 15(a) may be referred.

- (v) This is acceptable to PSPCL.

- (vi) In case of Solar CPP for 100% self-use, (Where no wheeling and sale of power is involved), the AC capacity of inverter/ Peak DC Capacity of the generating plant should not be more than the sanctioned load/contract demand of the consumer. Moreover, the capacity of the existing line laid to the consumer premises is for meeting the contract demand of the consumer.

## Commission's Findings and Order

(a) The most of the suggestions of the objector have already been provided in the Regulations. The banking charges and other terms & conditions shall be approved separately after inviting public suggestions/comments.

(b&c) The captive generating plants are set up primarily for own consumption and the purpose of allowing banking in these regulations is only to facilitate captive generation, as provided in National Electricity Policy, by taking care of inadvertent mismatch between generation and consumption. Setting up of extra generating capacity and to use grid as a battery through banking arrangement cannot be allowed as it will not only create system operation problems but would also have serious impact on the finances of the licensee resulting in additional burden on other consumers. Thus while allowing banking, reasonable conditions have to be imposed to protect the legitimate interests of all stakeholders. The facility of banking is being provided to RE based CGPs due to variable nature of generation from such sources and to promote green energy as per Section 86(1)(e) of the Electricity Act, 2003. The banking facility cannot be extended to CGPs running on conventional fuel.

The banking facility shall be available to Captive Users getting power from renewable energy based CGPs connected to the intra-state transmission and/or distribution system of the licensee.

The banking charges and other terms & conditions shall be separately approved in the detailed procedure.

(d) The banking on yearly basis and drawal of banked energy has been specified to protect the interests of all the stakeholders and keeping in view the peculiar demand-supply curve of the State.

(e) (i) The banked energy is supposed to be consumed by the captive user in the subsequent months and in view of the demand-supply scenario in the State and fixed cost liability of the distribution licensee, the unutilised banked energy at the end of the financial year cannot be compensated as it will put extra burden on other consumers of the State.

- (ii) Open Access charges are governed by Open Access Regulations
- (iii) The banking charges and other terms & conditions shall be approved in the detailed procedure after getting suggestions/comments from the stakeholders.
- (iv) The banking facility shall be available to Captive User getting power from renewable energy based CGPs connected to the intra-state transmission and/or distribution system of the licensee
- (v) All the obligated entities are governed by the provisions of RPO Regulations.
- (vi) Refer to para 4(a) of the Commission's Findings and Order.
- (f) Refer to Commission's Finding and Order at (b) & (c) above.
- (g) PSPCL has suggested that there should be no drawal of banked energy from 1st June to 30th September instead of 15<sup>th</sup> June to 30th September. The clause has been amended. It has been suggested that peak hours shall be as declared by SLDC/RLDC which is not acceptable as Commission shall decide the peak hours from time to time to protect the interest of all stakeholders. The other suggestion that Captive Solar Generators shall also ensure firm power for at least 12 hours by making suitable Battery Energy Storage System arrangements is not as per the provisions of the Act and the Rules.

The Commission approves the Punjab State Electricity Regulatory Commission (Harnessing of Captive Power Generation) Regulations, 2022 with the modifications as discussed above.

Sd/-

**(Paramjeet Singh)**  
Member

Sd/-

**(Viswajeet Khanna)**  
Chairperson

**Chandigarh**  
**Dated: 27.10.2022**