

## **PUNJAB STATE ELECTRICITY REGULATORY COMMISSION**

### **Draft Notification**

The -----, 2022

**No. PSERC/Secy./Regu./** : In exercise of the powers conferred under Section 181 of the Electricity Act, 2003 (36 of 2003) read with section 61, 66, 86(1)(b), 86(1)(e) and all other powers enabling the Commission in this behalf, the Punjab State Electricity Regulatory Commission hereby makes the following Regulations for harnessing captive power generation.

#### **1. Short title and commencement:**

- a) These Regulations shall be called the “Punjab State Electricity Regulatory Commission (Harnessing of Captive Power Generation) Regulations, 2022”.
- b) These Regulations shall be applicable to all the Captive Generating Plants in the State of Punjab.
- c) These Regulations shall come into force from the date of their publication in the official Gazette of the State of Punjab.

#### **2. Definitions**

In these Regulations, unless the context otherwise requires;-

- a) “Act” means the Electricity Act, 2003;
- b) “Banking” means the facility by which electrical energy remaining unutilized after consuming by the Captive User(s) out of the energy injected by the Captive Generating Plant (CGP) into the intra-state transmission and/or distribution system of distribution licensee, is allowed to be banked for utilization by the Captive User(s) at a later stage by the distribution licensee on payment of banking charges and as per other terms and conditions as may be approved by the Commission;
- c) “Billing cycle” means a period of one month;
- d) “Contract Demand” means the maximum demand in kVA sanctioned to a consumer;

- e) "Captive Generating Plant (CGP) or Captive Power Plant (CPP)" means a power plant set up by any person to generate electricity primarily for his own use and includes a power plant set up by any co-operative society or association of persons for generating electricity primarily for use of members of such cooperative society or association and fulfils the criteria as laid down in Rule 3 of the Electricity Rules, 2005;
- f) "Captive User" means the end user of the electricity generated in captive Generating Plant and the term "captive use" shall be construed accordingly ;
- g) "Cogeneration" means a process which simultaneously produces two or more forms of useful energy (including electricity);
- h) "Company" means a company formed and registered under the Companies Act, 1956 and includes any body corporate under a Central, State or Provincial Act;
- i) "Conventional Fuel" means any fossil fuel such as coal, lignite etc.;
- j) "Deviation" in a time block for a Seller means its total actual injection minus its total scheduled generation and for a Buyer means its total actual drawal minus its total scheduled drawal;
- k) "Deviation Charges" means the Charges for Deviation as specified by the Commission from time to time;
- l) "Firm Power" means the power supplied on agreed terms & conditions by a CGP owner to a licensee as per the contract;
- m) "Generating company" means any company or body corporate or association or body of individuals, whether incorporated or not, or artificial juridical person, which owns or operates or maintains a generating station;
- n) "Infirm Power" means power injected in to the grid by a CGP which is not committed and is not covered under any contract with the distribution licensee.

- o) “Licensee” means means a person who has been granted a licence under section 14 of the Act;
- p) “Open Access Regulations” means the Punjab State Electricity Regulatory Commission (Terms and conditions for Intra-State Open Access) Regulations, 2011, as amended from time to time;
- q) “Person” shall include any company or body corporate or association or body of individuals, whether incorporated or not, or artificial juridical person;
- r) “Reactive Power” means the product of voltage and current and the sine of the phase angle between them measured in units of volt amperes reactive and standard multiples thereof;
- s) “Renewable Energy Source” means renewable energy source approved by MNRE such as solar, wind, biomass, bagasse, municipal solid waste and other such sources;
- t) “Standby contract demand” means the maximum demand in kVA contracted by the CGP under Standby power agreement with the distribution licensee of his area of supply;
- u) “Standby power” means the power required in case of planned or forced outage of the CGP, including for Startup;
- v) “Startup contract demand” means the maximum demand in kVA contracted by the CGP under Startup power agreement with the distribution licensee of his area of supply;
- w) “Startup power” means the power required in case of Startup, at the pre-commissioning stage or after a planned/ forced outage;
- x) “Verifying Authority/Agency” means the authority/agency authorised 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.

Words and expressions used in these Regulations and not defined specifically herein shall have the same meanings as assigned to them in the Act, Rules and the other regulations framed by the Commission.

### **3. Applicability**

These regulations shall be applicable to all Captive Generating Plants (CGP) 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.

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

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

- (1) A person may construct, maintain or operate a captive generating plant and dedicated transmission lines.
- (2) The supply of electricity from the captive generating plant through the grid shall be regulated in the same manner as the generating station of a generating company.
- (3) The person, who has constructed a captive generating plant, maintains and operates such plant, shall have the right to open access for the purposes of carrying electricity from his captive generating plant to the destination of his use subject to availability of adequate transmission and/or distribution facility determined by the State Transmission Utility or the distribution licensee, as the case may be. Any dispute regarding the availability of transmission and/or distribution facility shall be adjudicated upon by the Commission.
- (4) A CGP, in accordance with provisions of Section 9 of the Act, may sell surplus power, after consuming not less than 51% of the aggregate electricity generated in such plant determined on annual basis as prescribed in Rule 3 of the Electricity Rules, 2005 to a licensee as per the

provisions of the Act, Rules & these regulations and to any consumer in accordance with the provisions of Open Access Regulations.

- (5) 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, along with onetime permission fee at the rates approved by the Commission in the Schedule of General Charges. The distribution licensee shall communicate the permission within a period of 15 days. In case of any constraint or deficiency, the same shall be communicated with reasons by the licensee to CGP within a period of 15 days.
- (6) A CGP intending to supply electricity to a distribution licensee will bear all the cost of power evacuation facility including the switch yard and interconnection facilities up to the point of injection into the grid substation including cost of bay/breaker of the Licensee's grid sub-station.
- (7) A CGP connected in parallel with the grid, will ensure compliance of the State Grid Code & Indian Electricity Grid Code, as applicable and any other direction of SLDC issued from time to time for ensuring integrated grid operation and for achieving the maximum economy of the operation of power system.
- (8) The interconnection of CGP with the grid shall conform to the standards as provided in CEA(Technical Standards for connectivity to the Grid) Regulations, 2007, as amended from time to time and CEA(Technical Standards for connectivity of the Distributed Generation Resources) Regulations, 2013, as amended from time to time, as applicable.
- (9) The voltage level for interconnection with the grid shall be the voltage level specified for different loads/contract demand for supply to the consumers in accordance with the provisions of the Supply Code, 2014, as amended from time to time, subject to technical feasibility.
- (10) In case the installed capacity of CGP is 5 MW or more (or as may be specified by the Commission from time to time), such plants shall also be governed by the provisions of PSERC (Deviation Settlement Mechanism and related matters) Regulations, 2020 or PSERC (Forecasting,

Scheduling, Deviation Settlement and Related Matters of Solar and Wind Generation Sources) Regulations, 2019, as applicable.

- (11) To qualify as a 'captive generating plant' under section 9 read with clause (8) of section 2 of the Act and Rule 3 of the Electricity Rules 2005, a generating plant shall broadly have to fulfill the following two conditions;
- (i) not less than twenty six percent of the ownership is held by the captive user(s), and
  - (ii) not less than fifty one percent of the aggregate electricity generated in such plant, determined on an annual basis, is consumed for the captive use:

The CGP/captive user(s) fulfilling the criteria shall be eligible for exemptions in charges as provided in section 42 of the Act while availing open access for carrying the electricity to the designation of his own use.

- (12) The Commission shall separately approve the procedure/guidelines along with verifying agency/authority to collect the data and carrying out such verification exercise as may be approved by the Commission to establish that a generating plant has fulfilled the conditions laid down in section 9 read with clause (8) of section 2 of the Act and Rule 3 of the Electricity Rules 2005 to claim the status of a "Captive Generating Plant" during a financial year.
- (13) The CGP/Captive User(s) shall furnish all the requisite documents to the verifying agency/authority to establish the captive status of the generating plant as laid down Rule 3 of the Electricity Rules 2005. The verifying agency/authority shall be empowered to seek any additional information/document as may be required to establish captive status. In case the CGP/captive user(s) fails to fulfill the conditions to qualify as captive generating plant in a particular financial year, the entire electricity generated in that financial year shall be treated as if it is a supply of electricity by a generating company and shall not be eligible for benefits of a captive generating plant.
- (14) 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 matter shall be referred to the Commission through a petition by the distribution licensee for adjudication in accordance with the procedure approved by the Commission.

Provided that the distribution licensee shall not initiate proceedings to demand the cross subsidy surcharge and any other charges exempted to CGP/Captive user(s) during the financial year till adjudication of the matter by the Commission.

- (15) A CGP, which is an obligated entity under PSERC (Renewable Purchase Obligation and its Compliance) Regulations, 2011, as amended from time to time, shall ensure compliance of the said regulations.

## **5. Sale of surplus Power to a licensee**

### **5.1 Sale of Firm Power**

A CGP willing to sell surplus power to the distribution licensee in whose area of supply CGP is located, shall approach the distribution licensee with the proposal giving all the necessary details for sale of surplus power generated from CGP and shall register with the distribution licensee by submitting the documents, as prescribed by the licensee. Subject to meeting all the requirements of interconnection with the grid, as specified in Regulation 4 of these regulations, CGP shall enter in to a power purchase agreement with the distribution licensee in accordance with the provisions of these regulations. It shall be the responsibility of CGP to get necessary clearances and permissions before entering in to PPA.

#### **5.1.1 By a RE based CGP**

- (i) The surplus power injected shall be metered for each 15 minutes time block and settlement shall be made at the end of every billing period 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. In case no rate is discovered in that year, the available lowest tariff rate discovered in the latest previous year shall be considered.

Provided that the rate of purchase of Firm power may be differentiated between power procured during peak season i.e from 1<sup>st</sup> June to 30<sup>th</sup> September and non-peak season i.e from 1<sup>st</sup> October to 31<sup>st</sup> May.

Provided further that the rate of purchase during peak season shall be restricted to Pooled Cost of Purchase (APPC) for the previous year determined by the Commission.

- (ii) The surplus power purchased by the distribution licensee from the RE based CGP shall qualify towards Renewable Purchase Obligation (RPO) of the distribution licensee.

#### **5.1.2 By a conventional fuel based CGP**

The surplus power injected shall be metered for each 15 minutes time block. The rate of purchase shall be discovered based on competitive bidding guidelines issued by Ministry of Power, Government of India. In such case, the Commission shall adopt the rate for power purchase as discovered through such transparent competitive bidding in accordance with the provisions of the Act and the regulations.

#### **5.2 Sale of Infirm Power**

Infirm Power injected in to the grid by a CGP without any contract with the distribution licensee shall be treated as dumped power and no compensation shall be paid for such power by distribution licensee.

#### **6. Sale to a Third Party**

A CGP may sell surplus electricity to a third party subject to compliance with the Open Access Regulations notified by the Commission. The State Transmission Utility and the Licensee will facilitate such third party sale.

Provided that the distribution licensee shall have the first right of refusal to purchase the surplus power as per the provisions of these regulations.

#### **7. Standby and Startup Power**

Standby/Startup power shall be provided on request to the CGP, by the distribution licensee of his area of supply, subject to load shedding as is applicable to the embedded consumers of the licensee.



Provided that the CGP shall enter into an agreement with the distribution licensee for such demand as per the model agreement approved by the Commission. Provided further that Standby/Startup power shall be made available at 11 kV or higher voltage as specified in the 'Supply Code 2014', as amended from time to time and applicable voltage surcharge/ rebate shall be levied /allowed.

Provided also that the CGP, who is not a consumer of the licensee, shall have to establish, operate and maintain the required interconnecting infrastructure at his cost.

Wherever an agreement for Standby or Startup power exists between the CGP and the distribution licensee of his area of supply, he shall be required to pay to the distribution licensee a charge equal to Rs. 35 per kVA per month or part thereof or as may be decided by the Commission from time to time, towards commitment charges on the capacity (in kVA) contracted as Standby/Startup demand from the distribution licensee. The commitment charges shall apply uniformly every month commencing from the date of applicability of the agreement, irrespective of whether the CGP avails Standby/Startup power or not.

## **7.1 Standby power**

7.1.1 Standby power shall be admissible for the maximum period of 42 days in a financial year. The drawal of Standby power during any time block(s) of a day shall be counted as one day.

Provided that the maximum demand that can be contracted under Standby power shall not exceed the total rated capacity of all the captive generating units of the CGP.

7.1.2 For actual drawal of Standby power, in addition to the commitment charges, the CGP shall also be required to bear charges (including demand surcharge, whenever chargeable) as specified in the Schedule of Tariff for Temporary Supply of relevant category corresponding to the demand slab of total of Standby contract demand and Sanctioned CD (if any).

Provided that in case where Temporary Supply schedule of relevant

category is not available, the Standby power shall be provided by the distribution licensee on payment of charges as per Schedule of Tariff for Temporary Supply applicable to Large Supply (General) category.

Provided further that in case of CGP covered under Electricity (Promoting Renewable Energy through Green Energy Open Access) Rules, 2022, the charges shall be 1.1 times the charges applicable to relevant consumer tariff category corresponding to the demand slab of total of Standby contract demand and Sanctioned CD (if any).

Provided also that for billing during the period of availing Standby power, the demand for Standby power shall be calculated on daily basis considering the highest quantum of power scheduled in any particular time block of the day.

7.1.3 The charges for drawal of power during the period of availing Standby power shall be computed as under:

**(a) CGP who is a consumer of the distribution licensee**

- i) For the demand availed upto sanctioned CD, billing shall be as a regular consumer of the licensee.
- ii) For the Standby power availed i.e. demand recorded in excess of the sanctioned CD, the charges shall be computed as under:

- **Energy charges**

Energy charges shall be levied on the energy consumption calculated in proportion of the Standby power availed to the total demand recorded.

- **Fixed charges and/or Demand surcharge**

Upto 42 days in a financial year, fixed charges on daily basis shall be levied on the Standby power availed upto the limit of Standby contract demand.

In case, Standby power is drawn for more than 42 days in a financial year or if the Standby power availed exceeds the Standby contract demand, demand surcharge shall be chargeable on the same.

**(b) CGP who is not a consumer of the distribution licensee**

- **Energy charges** shall be levied on the total energy consumed during the period of availing Standby power.
- **Fixed charges and/or Demand surcharge**

Upto 42 days in a financial year, fixed charges on daily basis shall be levied on the maximum demand recorded upto the limit of Standby contract demand.

In case, Standby power is drawn for more than 42 days in a financial year or if the recorded drawal exceeds the Standby contract demand, demand surcharge shall be chargeable on the same.

**7.2 Startup Power**

7.2.1 Startup power shall be provided to the CGP who is neither a consumer of distribution licensee nor has an agreement for availing the Standby power. Provided that, maximum demand that can be contracted under Startup power shall not exceed 15% of the rated capacity of the unit with highest rating in the power plant. In case, the recorded drawal of the CGP exceeds its Startup contract demand, it shall be liable to pay demand surcharge as specified in the Schedule of Tariff for Startup power.

7.2.2 For actual drawal of Startup power, in addition to the commitment charges, the CGP shall also be required to bear charges as specified in the Schedule of Tariff for Startup Power.

**8. Metering**

Every captive generating plant connected to the intra-state transmission and/or distribution system shall provide ABT compatible Special Energy Meter (SEM) at the interconnection point between CGP and the licensee

for recording and storing all the load survey & billing parameters for every 15-minutes time blocks or such shorter duration as may be specified by the Commission, in accordance with the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, as amended from time to time (CEA Metering Regulations) read with State Grid code. The SEM shall also be provided at the drawal point(s) of the Captive user(s) in accordance with the provisions of CEA Metering Regulations read with State Grid Code. Automated Meter Reading (AMR) system shall be used for communicating interface data on real time basis at SLDC. Internal clock of the interface meter shall be time synchronised with GPS. Meter readings at the interval, as specified by the Commission from time to time, shall be forwarded to the SLDC in addition to data provided through Supervisory Control and Data Acquisition (SCADA) for energy accounting.

In case the CGP and the captive user(s) are located in the same premises then separate metering arrangement shall be made for metering the generation of CGP and consumption by captive user(s) separately. In case the captive user(s) is also a consumer of the licensee and there is arrangement for sale of power by CGP through the grid then the injection and drawal of power from the grid shall be metered separately through import and export meters.

**9. Forecasting, Scheduling, Energy Accounting and Deviation Settlement**

The CGPs connected to the intra-state transmission and/or distribution system shall be required to provide injection schedule as per State Grid Code read with Open Access Regulations.

Provided that the scheduling, accounting and deviation settlement of CGPs shall be governed by the provisions of PSERC (Deviation Settlement Mechanism and related matters) Regulations, 2020 read with State Grid Code.

Provided further that the forecasting, scheduling and deviation mechanism of Solar and Wind based CGPs shall be governed by the provisions of

PSERC (Forecasting, Scheduling, Deviation Settlement and Related Matters of Solar and Wind Generation Sources) Regulations, 2019.

Provided also that the CGPs with installed capacity below the threshold capacity, as specified by the Commission in 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, as applicable, connected to intra-state transmission and/or distribution system for supply of power to licensee and/or consumer and availing open access shall furnish schedule to SLDC and shall be governed by Open Access Regulations.

10. **Billing**

Based on the energy account prepared by the SLDC, a CGP shall raise bill at the end of each billing cycle for surplus electricity actually injected for supply to the licensee as per the provisions of PPA based on the meter readings at the interface point within 7 days of the date of reading. The licensee shall raise bill for any energy drawal from the grid by CGP including standby power as per applicable tariff within 7 days of the date of reading. In case the net amount is payable by the licensee the same shall be paid by the licensee after adjusting the amount payable by CGP to the licensee within 7 days or as per the provisions of PPA from the date of issue of final invoice. The Licensee shall be liable to pay late payment surcharge in case of delayed payments at the rate as prescribed in Electricity (Late payment surcharge and related matters) Rules, 2022, as amended from time to time. In case the amount payable by the Licensee for purchase of power is less than the total charges payable by the CGP to the licensee, then the CGP shall pay the net amount within 7 days from the date of issue of invoice by the licensee. CGP shall also be liable to pay surcharge for delayed payments at the rate approved by the Commission in General Conditions of Tariff applicable to HT/EHT consumers.

The captive user, who is a consumer of the distribution licensee, shall be liable to pay the charges as per the applicable tariff for energy drawn from

the licensee along with all other applicable charges such as meter rentals, Open Access charges etc. as may be payable by CGP to the Licensee as per Open Access Regulations and these regulations. In case the captive user exceeds his sanctioned contract demand/Admissible drawal, he shall also be liable to pay demand surcharge as applicable.

Provided that the captive user shall not be liable to pay cross subsidy surcharge and additional surcharge but shall be liable to pay applicable wheeling charges &/or transmission charges and the losses in wheeling/transmission of energy as determined by the Commission for the relevant year.

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.

Provided also that in case of supply of power to a person, other than captive user, such person shall pay cross subsidy surcharge, additional surcharge, applicable wheeling charges &/or transmission charges and all other charges as specified in Open Access Regulations and these Regulations.

**11. Banking of Energy:**

The banking facility shall be available to renewable energy based CGPs connected to the intra-state transmission and/or distribution system of the licensee and availing open access after entering into a banking agreement with the distribution licensee. The banking facility shall be allowed on following terms and conditions;

- (i) The captive generating plant must fulfill the criteria as prescribed in Rule 3 of Electricity Rules, 2005.
- (ii) 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 15<sup>th</sup> June to 30<sup>th</sup> September and also during peak load hours, as may be approved by the Commission.

- (iii) The banked energy shall be permitted to be carried forward from month to month basis till the end of the financial year. The banked energy remaining unutilized at the end of the financial year shall lapse and no compensation shall be paid for such lapsed bank energy.
- (iv) The banking charges shall be levied in kind at the rate and in the manner as may be approved by the Commission.
- (v) It shall be the obligation of the captive generating station and the captive user(s) to ensure that conditions as prescribed in Rule 3 of the Electricity Rules, 2005 to get captive status, are complied with at the end of each financial year.
- (vi) In case the CGP/captive user(s) fail to fulfill the conditions to qualify as captive generating plant, the entire electricity generated shall be treated as if it is a supply of electricity by a generating company and the total banked energy during the year shall be treated as infirm power injected in to the grid by CGP and shall be accounted for as per Regulation 5.2 of these regulations. The energy drawn from the grid shall be charged at the tariff rates applicable to the relevant category, as approved by the Commission in the tariff order for the relevant year.
- (vii) The energy account of all banking transactions shall be maintained by SLDC.

The licensee shall 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.

## **12. Repeal and savings**

- (i) The Punjab State Electricity Regulatory Commission (Harnessing of

Captive Power Generation) Regulations, 2009 along with amendments shall stand repealed from the date of commencement of these Regulations.

- (ii) Notwithstanding such repeal, anything done or purported to have been done under the repealed Regulations shall be deemed to have been done or purported to have been done under these Regulations.
- (iii) On the commencement of these Regulations, any reference to “Captive Power Plant (CPP) in any other Regulations or Order of the Commission shall be deemed to be replaced with “Captive Generating Plant (CGP)”.

**13. Saving of inherent power of the Commission:-**

- (1) Nothing in these Regulations shall be deemed to limit or otherwise affect the inherent power of the Commission to make such orders as may be necessary for meeting the ends of justice or to prevent the abuse of the process of the Commission.
- (2) Nothing in these Regulations shall bar the Commission from adopting a procedure, which is at variance with any of the provisions of these Regulations, if the Commission, in view of the special circumstances of a matter or class of matters and for reasons to be recorded in writing, deems it necessary or expedient.
- (3) Nothing in these Regulations shall, expressly or impliedly, bar the Commission to deal with any matter or exercise any power under the Act for which no Regulations have been framed, and the Commission may deal with such matters and exercise powers and functions in a manner it thinks fit.

**14. Issue of orders and practice directions:-**

Subject to the provisions of the Act and these Regulations, the Commission may, from time to time, issue orders and practice directions in regard to the implementation of the Regulations and procedure to be followed on various matters which the Commission has been empowered by these Regulations to lay down.



**15. Power to remove difficulties**

If any difficulty arises in giving effect to any of the provisions of these Regulations, the Commission may do or undertake things or by a general or special order, direct a Licensee or CGP to take suitable action not being inconsistent with the Act, which appears to the Commission to be necessary or expedient for the purpose of removing difficulties.

**16. Power to amend**

The Commission may, at any time, add or amend any of the provisions of these Regulations.

**By Order of the Commission,**

**Sd/-**

**Secretary to the Commission**