



**Detailed Procedure for Banking of Power  
and  
Model Banking Agreement for  
by  
Green Energy Open Access Consumer**

In accordance with

**Punjab State Electricity Regulatory Commission  
(Terms & Conditions for Intra-State Open Access) Regulations, 2011  
(as amended from time to time)**

**To be approved by  
Punjab State Electricity Regulatory Commission**

## 1. OUTLINE:-

This procedure is in accordance with the Punjab State Electricity Regulatory Commission (Terms and Conditions for Intra-State Open Access) Regulations, 2011 (as amended from time to time), hereinafter referred as "Open Access Regulations". All the applicants shall abide by the provisions of these Regulations. In case of any inconsistency in the provisions of this procedure with the Act/Rules/Regulations framed under the Act, the provisions of the Act/Rules/Regulations shall prevail.

## 2. Definitions and Interpretation

In this procedure unless the context otherwise requires;

- i. **"Act"** means the Electricity Act, 2003 (36 of 2003);
- ii. **"Admissible Drawal"** means the entitlement of open access customer during any time block of the day from the distribution licensee as per the provisions of Open Access Regulations;
- iii. **"Banking"** means the energy scheduled and injected into the grid and credited with the distribution licensee which shall be drawn later, on such terms and conditions as may be approved by the Commission in its Open Access Regulations ;
- iv. **"Banking Charges"** means percentage deduction made in kind from the energy banked or charges in Rs./kWh levied on banked energy, towards banking charges, as approved by the Commission from time to time;
- v. **"Billing cycle"** means a period of one month;
- vi. **"Contract Demand"** means the maximum demand in kVA sanctioned to a consumer;
- vii. **"Captive Generating Plant (CGP) or Captive Power Plant (CPP)"** means a RE based 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;
- viii. **"Captive User"** means the end user of the RE Power generated in Captive Generating Plant and the term "captive use" shall be construed accordingly;
- ix. **"Central Commission (CERC)"** means Central Electricity Regulatory Commission referred to in subsection (1) of Section 76 of the Act;
- x. **"Cogeneration"** means a process which simultaneously produces two or more forms of useful energy (including electricity);
- xi. **"Commercial Operation Date (CoD)"** means the date on which the Project or any of its units is/are declared as available for commercial operation on successful completion of requisite test(s) and conditions;
- xii. **"Commission" or "PSERC"** means the Punjab State Electricity Regulatory Commission referred to in subsection (1) of section 82 of the Act;

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- xiii. **"Company"** means a company formed and registered under the Companies Act, 1956 and includes anybody corporate under a Central, State or Provincial Act;
- xiv. **"Contracted Capacity"** means capacity for which open access has been granted to Green Energy Open Access consumer for transmission/ wheeling;
- xv. **"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 drawl minus its total scheduled drawl;
- xvi. **"Deviation Charges"** means the Charges for Deviation as specified by the Commission from time to time;
- xvii. **"Deviation Settlement Mechanism"** means and include the framework for energy accounting, deviation accounting, rules for pricing of deviation(s) payable and receivable by the State entities and other design parameters as specified under Punjab State Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2020 and/or Punjab State Electricity Regulatory Commission (Forecasting, Scheduling, Deviation Settlement and Related Matters of Solar and Wind Generation Sources) Regulations, 2019, as amended from time to time;
- xviii. **"Drawl Point"** means the interface point at which the wheeled/banked power shall be drawn by captive user and metering shall be done;
- xix. **"DSM Regulations"** means Punjab State Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2020, as amended from time to time;
- xx. **"F&S Regulations"** means Punjab State Electricity Regulatory Commission (Forecasting, Scheduling, Deviation Settlement and Related Matters of Solar and Wind Generation Sources) Regulations, 2019, as amended from time to time;
- xxi. **"Financial Year"** means year starting from 1<sup>st</sup> day of April of a calendar year and ending on the 31<sup>st</sup> day of March of the following calendar year;
- xxii. **"Firm Power"** means the power supplied on agreed terms & conditions by a CGP owner to a licensee as per the contract;
- xxiii. **"Full Open Access Consumer"** shall mean Open Access Consumer connected to transmission system or distribution system but not having any contract demand with the distribution licensee within the state;
- xxiv. **"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;
- xxv. **"Green Energy"** means the electrical energy from renewable sources of energy including hydro storage (if the storage uses renewable energy) or any other technology as may be notified by the Government of India from time to time and shall also include

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any mechanism that utilizes green energy to replace fossil fuels including production of green hydrogen or green ammonia as per provision of the Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022;

- xxvi. **“Green Energy Open Access”** means the open access allowed to a consumer including captive user for carrying electricity from green energy source as per provisions of Open Access Regulations read with the Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022;
- xxvii. **“Green Energy Open Access Consumer” or “GEOA Consumer”** means any consumer of PSPCL who has sanctioned contracted demand of 100 kVA or more either through single connection or through multiple connections aggregating to 100 kVA or more located in the same electricity division of a distribution licensee or such other limit as may be specified by Commission from time to time, except for captive consumers, who are supplied with electricity from green energy sources for their own use by a licensee or the Government or by any other person engaged in the business of supplying electricity to the public under this Act or any other law for the time being in force and includes any person whose premises are for the time being connected for the purpose of receiving green energy with the works of a licensee, the Government or such person, as the case may be;
- xxviii. **“Grid Code” (or “SGC”)** means the Grid Code specified by the Commission under clause (h) of subsection(1) of Section 86 of the Act;
- xxix. **“Imbalance Charges”** means the deviation charges stipulated for open access customers under Regulation 31 of Open Access Regulations;
- xxx. **“Indian Electricity Grid Code” (or “IEGC”)** means the Grid Code specified by the Central Electricity Regulatory Commission under Section 79(1)(h) of the Act;
- xxxi. **“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;
- xxxii. **“Injected Energy”** means the kilowatt hour (kWh) of electricity actually exported and measured by the energy meters at the Injection Point;
- xxxiii. **“Injection Point”** means the interconnection point at which power to be transmitted/wheeled for captive use shall be injected by the CGP into the PSPCL/PSTCL network;
- xxxiv. **“Installed Capacity”** means the capacity of the Project at the generating terminal(s);
- xxxv. **“Interface Meters or Special Energy Meters (SEM)”** means interface/ SEM meters as defined by the Central Electricity Authority under the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, as amended from time to time;

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- xxxvi. **“Interface Point” or “Interconnection Point”** means the interface of captive power generator with the network of distribution or transmission licensee(PSPCL/PSTCL) and interface of captive user with the network of distribution or transmission licensee (PSPCL/PSTCL);
- xxxvii. **“Licensee”** means a person who has been granted a licence under section 14 of the Act;
- xxxviii. **“Load Despatch Centre”** means National Load Despatch Centre, Regional Load Despatch Centre or State Load Despatch Centre, as the case may be, responsible for coordinating, scheduling of the Buyers and the Sellers in accordance with the provisions of Grid Code;
- xxxix. **“Metering Point”** for purposes of recording of Injected Energy at the Injection Point and recording consumption at the drawl point, which shall include ABT/SEM ( Special Energy Meters) as specified in the PSERC(Terms and Conditions for Open Access) Regulations, 2011 and State Grid Code, as amended from time to time and in accordance with the CEA (Installation and Operation of Meters) Regulations, 2006 (as amended from time to time) with the facilities to record both export and import of electricity to/from the transmission/distribution network of license and to communicate its readings to State Load Dispatch Centre on real time basis or as specified by the Commission;
- xl. **“Non-Paddy Season”** means lean period of the year, other than paddy season/ peak seasonal period approved by the Commission;
- xli. **“Off-Peak hours”** means period of the day, other than Peak hours/ Peak Load Hours approved by the Commission;
- xlii. **“Paddy Season”** means peak seasonal period as stipulated by the Commission in the Open Access Regulations;
- xliii. **“Partial Open Access Consumer”** shall mean Open Access Consumer connected to the transmission system or distribution system and having his contract demand with the distribution licensee within the state;
- xliv. **“Peak hours”** means Peak Load Hours period of the day, as approved by the Commission from time to time;
- xlv. **“Person”** shall include any company or body corporate or association or body of individuals, whether incorporated or not, or artificial juridical person;
- xlvi. **“PSPCL”** means Punjab State Power Corporation Limited, a successor company of the erstwhile Punjab State Electricity Board (PSEB), notified as the Distribution Licensee (discom) by Government of Punjab and entrusted with the work of Generation and Distribution business of erstwhile PSEB;
- xlvii. **“PSTCL”** means Punjab State Transmission Corporation Limited, a successor company of erstwhile Punjab State Electricity Board (PSEB), notified as State Transmission Utility

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(STU) by Government of Punjab and entrusted with the work of transmission business of erstwhile PSEB and responsibility to operate the SLDC;

- xlvi. **“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;
- xlix. **“Renewable Energy (RE) Source”** means renewable energy source approved by MNRE such as solar, wind, biomass, bagasse, municipal solid waste and other such sources;
- I. **“Scheduled Entitlement”** for any open access customer means the schedule approved by the SLDC for that Open Access customer in a particular time block. Provided that for the purpose of computation of Banked Energy for a Green Energy Open Access consumer availing Intra-State Open Access, scheduled entitlement will be the energy available for drawal at consumer end i.e. actual energy injected minus losses minus transmission and wheeling charges.
  - ii. **“Standby contract demand”** means the maximum demand in kVA contracted by the open access consumer under Standby power agreement with the distribution licensee of his area of supply;
  - lii. **“Standby power”** means the power required in case an Open Access customer is unable to procure/ draw power from open access source due to outage of generator with whom he has the agreement to procure power or failure of transmission/distribution system;
  - liii. **“Startup contract demand”** means the maximum demand in kVA contracted by the RE generator under Startup power agreement with the distribution licensee of his area of supply;
  - liv. **“Startup power”** means the power required in case of Startup, at the pre-commissioning stage or after a planned/ forced outage;
  - lv. **“State Entity”** means such person who is in the SLDC control area and whose metering and energy accounting is done at the state level;
  - lvi. **“State Load Despatch Centre”(or “SLDC”)** means the Load Despatch Centre of the State established under sub section (1) of section 31 of the Act, responsible for co-ordinating scheduling of the state entities in accordance with the provisions of State Grid Code;
  - lvii. **“Time-Block”** means a time block of 15 minutes or any such shorter duration as may be notified by the Commission, for which specified electrical parameters and quantities are recorded by a special energy meter, with the first time block starting at 00.00 hours;
3. **“Verifying Authority/Agency”** means the authority/agency 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 i.e. Central Electricity Authority for CGPs undertaking Inter-State Open Access transactions (as per MOP, GoI Notification dated 11.4.2023).

#### 4. Applicability:-

This Procedure shall apply to Green Energy Open Access Consumers (consumers of PSPCL desirous of availing banking facility), connected with the Intra-state transmission and/or distribution system of the State and wheeling power under Open Access (Inter State Open Access/ Intra State Open Access) or .

In case of GEOA consumers wheeling power for captive use from RE based CGP located within the State, the provisions of PSERC (Harnessing of Captive Power Generation) Regulations, 2022 and provisions of Banking Procedure approved by PSERC vide its order dated 19.04.2023 in Petition No. 29 of 2022 shall also be applicable.

#### 5. Connectivity and Open Access

The application and grant of connectivity and open access shall be governed by the provisions of Open Access Regulations read along with the relevant connectivity and open access procedures and Electricity Supply Code Regulations.

#### 6. Verification of Captive Status of Green Energy Open Access Consumer wheeling power for Captive use

6.1 The verification of Captive status of Green Energy Open Access consumers wheeling power for Captive use RE based CGP with respect to the criteria of consumption and equity share holding, as prescribed under Section 9 of the Act read with Rule 3 of the Electricity Rules, 2005, as amended from time to time, shall be done by the Verifying Authority/ agency i.e. Central Electricity Authority for Inter-State Open Access (RE generator located outside the State) or PSERC for Intra-State Open Access (Re generator located within the State). The verification of captive status in case of Intra-State Open Access shall be done in accordance with the procedure approved by the PSERC vide its order in Petition No. 47 of 2022 dated 07.05.2023, while the verification in case of Inter-State Open Access shall be done in accordance with the procedure stipulated by CEA.

6.2 In case the verifying agency/authority or PSPCL 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 by the verifying agency/authority or PSPCL for adjudication.

#### 7. Application for Banking

7.1 The Green Energy Open Access Consumer shall apply for banking in the prescribed application form (**Annexure-1 A**) simultaneously while making application for grant of Open Access or at least a month prior to the commencement of open access/ Banking, whichever is earlier. Prior to signing of banking agreement, the Green Energy Open Access Consumer should have secured connectivity and entered into connectivity agreement for open access with the STU/ Distribution licensee, as applicable. Further,

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the Green Energy Open Access Consumer should have been granted open access by the nodal agency prior to injection of banked energy.

## **7.2 Nodal Office:**

The application for banking shall be submitted to the Nodal Office, which shall be O/o Chief Engineer/ Power Purchase and Regulations (PP&R), PSPCL, Shed No. D-3, Shakti Vihar, Patiala.

## **7.3 Documents to be submitted along with the Application:**

- a. Self-attested Copy of connectivity agreement/approval;
- b. Self-attested Copy of Open Access approval from nodal agency i.e. SLDC/ PSTCL;
- c. Copy of the Board Resolution of the company/ Power of Attorney/ Authorization Letter, authorizing filing of application and designating an authorized person for filing the same, where the Applicant is a company (attested by Company Secretary/ Chartered Accountant). In case of partnership, copy of authorization letter/ power of attorney from all partners will be required.
- d. Self-attested Copy of approval of the project by PEDA, if applicable;
- e. For Green Energy Open Access Consumers wheeling power for captive use RE based CGP i.e. CGPs injecting first time into the Grid or for existing CGPs i.e. CGPs already injecting into the grid but making application for the first time under this procedure, only certificate from Chartered Accountant or Company Secretary, as applicable, regarding fulfilment of Rule 3 (1) (a) (i) of Electricity Rules, 2005 i.e. not less than 26 % of ownership held by Captive user(s) shall be required.
- f. For Green Energy Open Access Consumers wheeling power for captive use RE based CGP i.e. CGPs already injecting into the grid and making application under this procedure in subsequent year(s), Certificate of Verifying authority regarding Captive status for last/previous year shall be required;
- g. Self-attested copy of A&A form of Green Energy Open Access Consumer ;
- h. Self-attested copy of Latest energy bill of Green Energy Open Access Consumer(only allowed to PSPCL Consumers);
- i. Undertaking for acceptance of terms & conditions as per **Annexure-1B**.

**7.4** After scrutiny, nodal office shall intimate the deficiencies in the application, if any, to the applicant within ten days of receipt of application. The applicant shall rectify the deficiency within ten days thereafter.

## **7.5 Banking Agreement**

After approval of banking from the nodal office, the applicant shall enter into a tripartite banking agreement with PSPCL& PSTCL at the terms and conditions specified in the agreement, as provided in the Open Access Regulations within 30 days

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of receipt of approval. The agreement shall be terminated in event of any default on the part of the Green Energy Open Access consumer as provided in the Banking Agreement or in case the Commission withdraws the facility of Banking. Copy of tripartite Model Banking Agreement is enclosed at **Annexure-2**.

**8. Terms and conditions for Banking:**

- 8.1** The banking facility shall be available to Green Energy Open Access Consumer, connected to the intra-state transmission and/or distribution system of the licensee after entering into a banking agreement with the distribution licensee, as per the terms & conditions and on payment of banking charges to compensate the distribution licensee for additional cost on this account along with other applicable charges, as approved by the Commission from time to time.

Provided that the drawl of banked energy shall not be allowed during the peak seasonal period and also during peak load hours, as may be approved by the Commission in the Tariff order of the respective years of otherwise.

- 8.2** The permitted quantum of banked energy to be carried forward to next month shall be up to 30% of the total monthly consumption of electricity from PSPCL. The excess energy banked shall be treated as dumped energy and shall not be carried forward to next month.

Provided that the banked energy carried forward from previous month(s) shall be adjusted first and in case there is remaining unutilized energy after adjustment, the same shall not be subject to the 30% capping while carrying forward to next month.

Provided further that the unutilized surplus power shall be governed as per the provisions of Electricity (Promoting Renewable Energy through Green Energy Open Access) Amendment Rules, 2023 and all relaxation(s) and benefit(s) given to the GEOA consumers under GEOA Amendment Rules, 2023, including entitlement of the RE based CGP Renewable energy certificates to the extent of lapsed banked energy will automatically be applicable to GEOA consumers.

- 8.3** The banked energy remaining unutilized at the end of the financial year shall lapse and no compensation shall be paid for such lapsed banked energy. Provided that the unutilized surplus power shall be governed as per the provisions of Electricity (Promoting Renewable Energy Through Green Energy Open Access) Amendment Rules, 2023 and all relaxation(s) and benefit(s) given to the GEOA consumers under GEOA Amendment Rules, 2023, including entitlement of the RE based CGP Renewable energy certificates to the extent of lapsed banked energy will automatically be applicable to GEOA consumers.

- 8.4** The banked energy shall not be used for third party sale.

- 8.5** 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 and requisite

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documentary evidence is submitted to the verifying authority/ agency for certification of captive status.

- 8.6 If the RE based CGP or its Captive User (GEOA Consumer) fails to meet the criteria of ownership and consumption, by the end of the year, such CGP or Captive User (GEOA Consumer) shall lose its Captive status for that year leading to imposition of various charges as applicable to non-captive open access consumers. Further, in such case of GEOA consumers, who are Captive Users wheeling power from RE based CGP, the total energy banked and utilized by such captive user during the year shall be treated as infirm power injected in to the grid by CGP and shall be treated as dumped power and the energy drawn from the grid by such captive user 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.
- 8.7 The energy account of all banking transactions shall be maintained by SLDC. The banked energy shall be worked out by SLDC from the time slot wise energy statement in line with Clause 11 of this procedure.
- 8.8 The banking charges @10% of power banked (in kind) shall be levied, which may be revised with prior approval of the Commission. The banking charges may also be levied in Rs./ kWh with prior approval of the Commission.
- 8.9 Besides banking charges, the Green Energy Open Access Consumer, shall be liable to pay to PSPCL the following charges:
- For the energy drawn from the PSPCL, the consumer shall pay as per tariff applicable for the category as approved by the commission from time to time.
  - In case, the recorded drawal of a GEOA consumer exceeds the admissible drawal or sanctioned contract demand as the case may be, the consumer will be liable to pay demand surcharge on daily basis as per the applicable Schedule of Temporary supply for relevant category..
  - The open access charges corresponding to the contracted capacity, as approved by PSERC in Open Access Regulations and tariff order for the relevant year.
  - Any other charges, as specified in Open Access Regulations as amended from time to time shall also be applicable.
- (ii) Beside above, charges specified by the commission (i.e. open access charges e.g. transmission charges, wheeling charges, SLDC operating charges etc.) and Transmission & Distribution (T&D), technical losses (as notified by the commission) shall be borne by the Green Energy Open Access Consumer.

8.10 The Green Energy Open Access Consumer, seeking to avail banking facility, shall avail open access for the total quantum of power to be drawn from RE generator, including the maximum possible quantum of power to be banked and the open access charges shall be levied accordingly in line with the provisions of Open Access Regulations and as elaborated here under:-

**(i) Transmission Charges:-**

As per Regulation 23 of Open Access Regulations.

**(ii) Wheeling Charges:-**

As per Regulation 25 of Open Access Regulations.

**(iii) SLDC (Scheduling and System Operation) Charges:-**

As per Regulation 24 of Open Access Regulations.

**(iv) Cross-Subsidy Surcharge:-**

As per Regulation 26 of Open Access Regulations.

**(v) Additional Surcharge:-**

As per Regulation 27 of Open Access Regulations.

**(vi) Standby Charges:-**

As per Regulation 27 A of Open Access Regulations.

**(vi) Other Charges:-**

As per Regulation 27 B of Open Access Regulations.

**9. Data Telemetry/ Data Acquisition System (DAS):**

9.1 Real Time Injection/ Drawl Data from the Green Energy Open Access Consumer to SLDC shall be provided by the Green Energy Open Access Consumer (including necessary interfacing arrangements for data integration at SLDC end) in line with the provisions of State Grid Code. The Real Time data shall be transmitted upto SLDC through IEC: 101/104 protocol by providing a redundant (main & backup) communication link/ connectivity using any mode of communication e.g. Optical Fibre/PLCC/MPLS/RF/GPRS or any other latest technology available,. Further, main and backup communication links shall preferably be either through different

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communication modes or from different service providers (if same communication mode is used). The communication network i.e. PLCC/ Optical Fibre from PSTCL sub-stations to SLDC in Punjab is to be provided by STU (PSTCL) for telemetry of real time data upto SLDC.

The Data Acquisition System and communication network facilities including AMR system at the Generating Station/Injection Point and drawl point shall be provided and maintained by the Green Energy Open Access Consumer, as specified in the State Grid Code with due approval of technical features by SLDC or PSPCL as the case may be.

Green Energy Open Access Consumer shall follow the provisions of CERC (Communication Systems for Inter-State Transmission of Electricity) Regulations, 2017, as amended from time to time and technical standards, protocols for communication system etc. notified by CEA under aforesaid CERC Regulations for Communication Infrastructure to be used for data communication and tele-protection of power system and shall ensure the correctness of the real-time data.

- 9.2 In case Green Energy Open Access Consumer is wheeling power from Intra-State RE Generator (located within the State), the aforementioned provisions regarding Data Telemetry/ Data Acquisition System (DAS) shall also be complied by the concerned RE generator.

## **10. Metering:**

- 10.1 The Green Energy Open Access Consumer connected to the intra-state transmission and/or distribution system shall provide ABT compatible Main Special Energy Meter (SEM) of accuracy class 0.2S at the interconnection point between Green Energy Open Access Consumer along with and the licensee for recording and storing all the load survey & billing parameters (including both import and export of energy) for every 15-minutes time blocks and 5 minutes or lesser time block (preferably configurable) averages of all the Electrical Parameters along with voltage differentiated measurement of reactive energy for a minimum of 45 days, 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, Open Access Regulations and Procedures approved by the Commission. The Distribution licensee may provide Check Meters of the same specification as Main Meters.

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.

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In case Green Energy Open Access Consumer is wheeling power from Intra-State RE Generator (located within the State), the aforementioned provisions regarding Metering and AMR system shall also be complied by the concerned RE generator at its injection end, along with the compliance of CEA Metering Regulations, State Grid code, Open Access Regulations and Procedures approved by the Commission.

- 10.2 The metering equipment installed shall be as per PSPCL's latest technical specification or its amendment from time to time and shall comply with the relevant PSERC Regulations issued from time to time, CEA metering regulations and CEA guidelines on Advanced metering infrastructure.
- 10.3 Cost of metering and communication facilities shall be borne by the Green Energy Open Access Consumer/ concerned Intra-State RE Generator. Each meter i.e. at injection point, drawl point(s) and at the generation facility shall be tested by Meter testing laboratory of PSPCL and witnessed/sealed jointly by concerned field office of PSPCL in the presence of the authorized representative(s) of the Green Energy Open Access Consumer/ concerned Intra-State RE Generator at the cost of Green Energy Open Access Consumer/ concerned Intra-State RE Generator and shall not be interfered with by either party except in the presence of either party or its authorized representative. In the case of any tampering of metering cubicle or energy meters at the Green Energy Open Access Consumer's premises or at the concerned Intra-State RE Generator, this agreement shall be terminated.
- 10.4 All the main and check meters shall be periodically tested for accuracy/ RTC time-drift in line with the provisions of State Grid Code and CEA Metering Regulations. The cost of such test checking shall be borne by the Green Energy Open Access Consumer/ concerned Intra-State RE Generator at the rates specified by the PSPCL from time to time.
- Format of downloaded data of ABT compliant meters shall be as per format of PSPCL latest technical specification or its amendment from time to time also considering requirements of SLDC.
- 10.5 In case of defective main meters, the assessment of consumption shall be done on the basis of check/ standby meters in line with the provisions of State Grid Code.
- 10.6 The downloaded data of the SEM/ ABT meters for the previous month for power injected by the concerned Intra-State RE Generator and power consumed at the Green Energy Open Access Consumer's end for the previous month shall be supplied to SLDC, Punjab by 5<sup>th</sup> day of every month until AMR system is established and SAMAST scheme is implemented. Thereafter, SLDC will process the data on the basis of meter data and prepare time slot wise actual energy statement and adjustment sheet including banked units in the current month.
- 10.7 In the case of any tampering of metering cubicle or energy meters at the Green Energy Open Access Consumer's premises or at the concerned Intra-State RE

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Generator being detected or observed, the PSPCL shall have the right to withdraw the Banking facilities/Open Access and penalties shall be imposed as per rules/regulations of PSPCL/PSERC. The Banked units for that particular period shall be lapsed and no compensation shall be provided.

## **11. Forecasting, Scheduling, Accounting and Settlement:**

11.1 The forecasting of concerned Intra-State RE Generator, if Solar/ Wind based generator and having individual capacity/ Combined capacity of Pooling Station equal to 5 MW or above shall be in accordance with F&S Regulations. Further, the Scheduling, Accounting and Deviation Settlement of concerned Intra-State RE Generator shall be as per the provisions of SGC read along with: -

- F&S Regulations, for Solar/ Wind based generators having individual capacity/ Combined capacity of Pooling Station equal to 5 MW or above.
- DSM Regulations, for generators (other than Solar/ Wind) with capacity above 5 MW connected to Intra-State Transmission System connected to Intra-State Transmission System, where maximum injected power is above 5 MW.
- Open Access Regulations, for Solar/ Wind generator shaving individual capacity/ Combined capacity of Pooling Station less than 5 MW, generators (other than Solar/ Wind) with capacity of 5 MW or below and generators (other than Solar/ Wind) with capacity above 5 MW connected to distribution system.

11.2 The concerned Intra-State RE Generator under ambit of aforementioned regulations (F&S/ DSM/ Open Access Regulations) shall furnish its generation schedule to SLDC in line with aforementioned relevant regulations, while the concerned Intra-State RE Generator outside the ambit of aforementioned regulations shall furnish their generation schedule to SLDC in line with the provisions of open Access Regulations. The concerned Intra-State RE Generator shall submit the breakup of his injection schedule for the following:-

1. RE Generation (for drawl by Green Energy Open Access Consumer).
2. Additional Power to be sold through Open Access (transaction-wise detail), if any.
3. Power to be sold to PSPCL, if any.

11.3 The scheduling of GEOA consumer availing power under Inter-State Open Access shall be done by Northern Regional Load Despatch Centre (NRLDC)/ National Load Despatch Centre (NLDC) at Punjab State Periphery. The drawl schedule at GEOA consumer periphery shall be worked out by SLDC after deducting Intra-State T&D losses approved by PSERC.

The GEOA consumer wheeling power under Intra-State Open Access shall furnish its drawl schedule to SLDC, who shall approve the same in view of the Injection Schedule of

RE Generator supplying power to such GEOA consumer and system constraints, if any.

- 11.4 The deviation (over-injection/ under-injection) at the injection end of CGP, wherever applicable as per regulations mentioned at Sr.No. 11.1 above, shall be worked out for each time-block based on the difference between actual injection (as per data of ABT meters installed at injection end) and scheduled injection and settled on weekly basis in accordance with the provisions of applicable regulations.

The adjustment/ accounting of banked energy shall be as per following paras:-

- 11.5 The Energy available for drawl by Green Energy Open Access Consumer shall be worked out as under:-

**(a) Green Energy Open Access Consumer availing Intra-State Open Access (Source within the State of Punjab)**

**Energy available for drawl by Green Energy Open Access Consumer in  $i^{\text{th}}$  time-block:**

$$(E_{di}) = \{E_{gi} (1 - T\&D \text{ Losses} - \text{Transmission \& Wheeling charges} *)\}$$

*\* Transmission and wheeling charges as approved by the Commission from time to time. Presently @ 2% of energy injected into the grid.*

Where

$E_{gi}$  = Actual Injection of Intra-State RE Generator, from which Green Energy is being drawn, in  $i^{\text{th}}$  time-block

Provided that in case of multiple GEOA Consumers availing power from a single Intra-State RE generator,  $E_{gi}$  shall be the Actual Injection of Intra-State RE generator apportioned to the concerned GEOA Consumer based on percentage share of energy of such GEOA consumer from Intra-State RE generator.

Provided further that in case the Intra-State RE generator is having multiple open access transactions for sale/ captive use of power,  $E_{gi}$  shall be apportioned based on percentage share of energy generation depending on the injection schedule for each such transaction.

**(b) Green Energy Open Access Consumer availing Inter-State Open Access (Source outside the State of Punjab)**

**Energy available for drawl by Green Energy Open Access Consumer in  $i^{\text{th}}$  time-block:**

$$(E_{di}) = E_{gi} (1-T\&D \text{ Losses})$$

Where

$E_{gi}$  = Open Access Drawl Schedule of Green Energy Open Access Consumer at Punjab State periphery, in  $i^{\text{th}}$  time-block

- 11.6 Based on the difference between total consumption/ actual drawl of Green Energy Open Access Consumer (as per data of ABT meters installed at drawl end) and Energy available for drawl by Green Energy Open Access Consumer (as worked out in Sr.No. 11.4), the Consumption from PSPCL and Unutilized Energy available for banking shall be worked out for each time-block and settled on monthly basis.

**Consumption of Green Energy Open Access Consumer from PSPCL in  $i^{\text{th}}$  time-block**

$$= E_{ci} - E_{di}$$

(if  $E_{ci} > E_{di}$ , else  
Zero)

**Unutilized Energy available for banking in  $i^{\text{th}}$  time-block =  $E_{di} - E_{ci}$**

(if  $E_{ci} < E_{di}$ , else  
Zero)

Where

$E_{ci}$  = Actual total energy consumption/ drawl of Green Energy Open Access Consumer in  $i^{\text{th}}$  time-block

$E_{di}$  = Energy available for drawl by Green Energy Open Access Consumer in  $i^{\text{th}}$  time-block

- 11.7 The Banked Energy shall be worked out after deducting in-kind banking charges from the Unutilized energy available for banking.

As such, the Banked Energy shall be broadly calculated by SLDC as per following formula:-

**Banked Energy in  $i^{\text{th}}$  time block:**

$$(E_{bi}) = \text{Unutilized Energy available for banking in } i^{\text{th}} \text{ time-block} \times (1-B)$$

Or

$$(E_{bi}) = (E_{di} - E_{ci}) \times (1-B)$$

Where

$E_{bi}$  = Banked Energy in  $i^{\text{th}}$  time-block

$E_{di}$  = Energy available for drawl by Green Energy Open Access Consumer in  $i^{\text{th}}$  time-block (worked out as per Sr.No. 11.4/ 11.5 of this procedure)

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

Eci = Actual Total Energy consumption/ drawl of  
Green Energy Open Access Consumer in ith time-block

B = Banking charges (in kind) @ 10%

*Note: 1. Above calculation shall be made keeping in view the restrictions on drawl of banked power during the months/ hours.*

*2. Losses are the transmission losses and distribution losses (Technical losses) as approved by the PSERC in its Tariff Order for the relevant financial year.*

*3. Banked Energy is zero if Ebi is negative or zero*

*4. The previous balance of banked energy (carried forward from last month) shall be adjusted at the end of month.*

11.8 As there may be difference in Energy scheduled for drawal (as approved by SLDC based on injection schedule) and Energy actually available for drawal (based on actual injection) in each time-block, accordingly there may be difference in under-drawal and banked energy in each time -block.

Further in case of multiple open access transactions by GEOA consumer (involving open access from non-RE based generators/Power Exchange), the difference between under-drawal (worked out as a difference between actual drawal and total drawal schedule) and banking (difference between actual drawal and energy available for drawal from RE based generator) will increase further.

As such, the deviation (under-drawal) at the drawal end of Green Energy Open Access Consumer (who has been allowed/ availing banking facility) shall be the net deviation/ balance under-drawal as worked out in each time-block after deducting the banked energy (unutilized energy available for banking), if any, in the concerned time-block.

Provided that there shall be no net under-drawal in case the banked energy is more than or equal to under-drawal.

Such net deviation/ under-drawal, if any, after deducting the banked energy, shall be settled as per the as per applicable Deviation Settlement Mechanism/ Imbalance Charges mechanism.

11.9 Settlement of wheeled energy consumed at Green Energy Open Access consumer end shall be in the following priority:

(i) Green/ RE Power wheeled under Green Energy Open Access

(ii) Banked Energy

(iii) Non-RE Power purchased under Open Access, if any (other than RE/green

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

energy wheeled/banked)

(iv) Power drawn from PSPCL

11.10 The Green Energy/ RE Consumption by the Green Energy Open Access Consumer shall be separately worked out by SLDC for each time-block, which shall be the minimum of drawl schedule i.e. Edi (worked out as per Sr.No.11.4 of this procedure) and Actual Energy consumption/ drawl of Green Energy Open Access Consumer. This RE/Green Energy consumption shall be consolidated for the monthly accounting period in the monthly account.

11.11 **Considering the peak seasonal period as 1<sup>st</sup> June to 30<sup>th</sup> September\* (and with Peak Load Hours applicable only during the Peak Seasonal Period),** the adjustment of Consumption of Green Energy Open Access Consumer from PSPCL and Banked Energy shall be as under:-

- a) The total of banked energy (worked out for each time-block as per Sr.No. 11.7 above) shall be consolidated for the monthly accounting period as **“Energy banked during the month”**.
- b) **During the non-paddy season,** the energy drawn by the Green Energy Open Access Consumer from PSPCL shall be worked out for each time-block and consolidated for the monthly accounting period.

**The “Consumption from PSPCL”, shall be first settled/ adjusted by the PSPCL against the banked energy carried forward from previous month(s) and then against the banked energy accumulated in the current month. The balance, if any, remaining after settlement with banked energy, shall be charged by PSPCL at applicable tariff rate. The balance banked energy, if any, remaining after settlement, shall be carried forward to next month.**

**Provided that such remaining banked energy during each month in excess of 30 % of monthly consumption of electricity of Green Energy Open Access Consumer from PSPCL shall be considered as dumped energy in line with the provisions of Open Access Regulations and will not be carried forward to next month.**

**Provided further that the capping of 30% shall not be applicable for banked energy carried forward from previous month(s), which remains unutilized in current month and is again carried forward to next month**

**Provided further that the unutilized surplus power shall be governed in line with Electricity (Promoting Renewable Energy Through Green Energy Open Access) Amendment Rules, 2023 and as clarified at Sr.No.8.2 of this procedure.**

- c) **During the paddy season,** entire Consumption from shall be charged by the PSPCL at applicable tariff rate and no drawl of banked energy shall be allowed.

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

The energy banked during paddy season shall be carried forward each month till start of non-paddy season.

Provided that such banked energy during each month in excess of 30 % of monthly consumption of electricity of Green Energy Open Access Consumer from PSPCL shall be considered as dumped energy in line with the provisions of Open Access Regulations and will not be carried forward to next month.

Provided further that the capping of 30% shall not be applicable for banked energy carried forward from previous month(s), which remains unutilized in current month and is again carried forward to next month.

Provided further that the unutilized surplus power shall be governed in line with Electricity (Promoting Renewable Energy Through Green Energy Open Access) Amendment Rules, 2023 and as clarified at Sr.No.8.2 of this procedure.

- d) The “Accumulated Banked Energy carried forward from previous month(s)”, “Energy banked during the current month”, “Banked Energy drawn / settled during the month” and “Accumulated Banked Energy carried forward to next month” shall be clearly mentioned in the monthly account of Green Energy Open Access Consumer.

**Illustrations: (based on assumptions just to understand accounting procedure. The actual energy accounting shall be as per the relevant Regulations read with the approved procedure for banking based on the data captured by the meters. The peak seasonal period has been assumed as 1<sup>st</sup> June to 30<sup>th</sup> September\* (and with Peak Load Hours applicable only during the Peak Seasonal Period )**

**(A) Scenario 1 (Injected Energy < Consumed/ Drawn Energy)**

Say Actual Energy Injection by Intra-State RE Generator (supplying power to Green Energy Open Access Consumer under Intra-State Open Access) in  $i^{\text{th}}$  time-block ( $E_{gi}$ ) = 10 MW

Energy available for drawl by Green Energy Open Access Consumer in  $i^{\text{th}}$  time-block

$$\begin{aligned} (E_{di}) &= \{E_{gi} (1 - \text{T\&D Losses} - \text{Transmission \& Wheeling charges}^*)\} \\ &= 10 \times (1 - 2.46\% - 2\%) \\ &= 10 \times 0.9554 \\ &= 9.554 \text{ MW} \end{aligned}$$

Or Say Scheduled Energy by Inter-State RE Generator (supplying power to Green Energy Open Access Consumer under Inter-State Open Access) at Punjab State Periphery in  $i^{\text{th}}$  time-block ( $E_{gi}$ ) = 9.795 MW

Energy available for drawl by Green Energy Open Access Consumer in  $i^{\text{th}}$  time-block

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

$$\begin{aligned}
 (E_{di}) &= \{E_{gi} (1-T\&D \text{ Losses})\} \\
 &= 9.795 \times (1-2.46\%) \\
 &= 9.795 \times 0.9754 \\
 &= 9.554 \text{ MW}
 \end{aligned}$$

Say T&D Losses = 2.46 % (considering both RE Generator and Green Energy Open Access Consumer connected to Intra-State transmission system at 132 kV)

Transmission & Wheeling Charges = 2 % of energy injection schedule

Say Actual Total Energy consumption/ drawl of Green Energy Open Access Consumer in  $i^{\text{th}}$  time-block ( $E_{ci}$ ) = 7 MW

$$\begin{aligned}
 \text{Unutilized Energy available for Banking in } i^{\text{th}} \text{ time-block} &= E_{di} - E_{ci} \\
 &= 9.554 - 7 \\
 &= 2.554 \text{ MW}
 \end{aligned}$$

$$\begin{aligned}
 \text{Banked Energy in } i^{\text{th}} \text{ time-block} \\
 &= \text{Unutilized Energy available for Banking} \times (1-B) \\
 &= 2.554 \times (1-10\%) \text{ (Banking Charges @ 10\%)} \\
 &= 2.2986 \text{ MW}
 \end{aligned}$$

Say the RE Generator is a solar based generating station and each day is divided in different parts/ time-slots depending on the Solar Generation profile and Peak Load/ Off-Peak Load hours:-

**Slot 1: Maximum Solar Generation during Off-Peak Hours (6 Hours)**

Say the actual energy injection, consumption and banked energy shall remain same as above for these 6 no.peak solar hours

$$\text{Energy available for Drawl} = 9.554 \times 6 = 57.324 \text{ MWH}$$

$$\text{Actual Total Energy Consumption/ Drawl} = 7 \times 6 = 42 \text{ MWH}$$

Consumption from PSPCL = NIL (as Total Consumption < Energy Available for Drawl)

$$\text{Banked Energy} = 2.2986 \times 6 = 13.7916 \text{ MWH}$$

**Slot 2: Lower Solar Generation during Off-Peak Hours (6 Hours)**

Say the actual energy injection is less than 7 MW (ranging between 1 to 7 MW, and Total Energy available for drawl = 28 MWH

$$\text{Actual Total Energy consumption/ drawl} = 7 \times 6 = 42 \text{ MWH}$$

$$\text{Consumption from PSPCL} = 42 - 28 = 14 \text{ MWH}$$

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

Banked Energy = NIL (as Total Consumption > Energy Available for Drawl)

**Slot 3: No Solar generation during Off-Peak Hours (8 Hours)**

Energy Available for Drawl = NIL

Actual Total Energy consumption/ drawl =  $7 \times 8 = 56$  MWH

Consumption from PSPCL =  $7 \times 8 = 56$  MWH

Banked Energy = NIL (as Total Consumption > Energy Available for Drawl)

**Slot 4: No Solar generation during Peak Hours (4 Hours)**

Energy Available for Drawl = NIL

Actual Total Energy consumption/ drawl =  $7 \times 4 = 28$  MWH

Consumption from PSPCL =  $7 \times 4 = 28$  MWH

Banked Energy = NIL (as Total Consumption > Energy Available for Drawl)

**The daily Energy Account shall be as under**

Daily Energy Available for Drawl by Green Energy Open Access Consumer

= Total of all 4 slots =  $57.324 + 28 + 0 + 0 = 85.324$  MWH

Daily Total of Actual Energy Consumption/ Drawl = Total of all 4 slots =

$42 + 42 + 56 + 28 = 168$  MWH

Consumption from PSPCL during off-peak hours = Total of Off-Peak Slots 1 to 3

$= 0 + 14 + 56 = 70$  MWH

Consumption from PSPCL during peak hours = Total of Peak Slot 4 = 28 MWH

Banked Energy = Total of all 4 slots =  $13.7916 + 0 + 0 + 0 = 13.7916$  MWH

Say the daily details are same for each day of the month, the total for the month (30 days)/

**Monthly Energy Account shall be as under:-**

Monthly Energy Available for Drawl by Green Energy Open Access Consumer =  
 $30 \times 85.324 = 2559.72$  MWH

Monthly Total of Actual Energy Consumption/ Drawl =  $30 \times 168 = 5040$  MWH

Consumption from PSPCL- during off-peak hours of month =  $30 \times 70 = 2100$  MWH

Consumption from PSPCL during peak hours of month =  $30 \times 28 = 840$  MWH

Total Consumption from PSPCL during the month =  $2100 + 840 = 2940$  MWH

Banked Energy =  $30 \times 13.7916 = 413.748$  MWH

**Monthly Energy Account during For non-paddy season (April & May)**

Banked energy carried forward from previous months = Nil

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

Energy banked during the month = 413.748 MWH

Total chargeable Consumption from PSPCL (after adjustment of Banked Energy)

= 2940-413.748

= 2526.252 MWh

Net balance of Banked Energy to be carried forward to next month = Nil

#### **Monthly Energy Account during For paddy season (June)**

Banked energy carried forward from previous months = Nil

Energy banked during the month = 413.748 MWH

Total monthly chargeable consumption from PSPCL= (2100+840)= 2940 MWH

Limit of banked energy allowed to be carried forward to next month= 30% of 2940 MWH

=882 MWH

Banked Energy to be carried forward to next month = Minimum of (882 and 413.748) MWH

=413.748 MWH

#### **Monthly Energy Account during For paddy season (July)**

Banked energy carried forward from previous months = 413.748 MWH

Total monthly chargeable consumption from PSPCL= 2940 MWH

Energy banked during the month = 413.748 MWH

Limit of banked energy allowed to be carried forward to next month= 882 MWH

Banked Energy to be carried forward to next month = Minimum of (882 and 413.748) MWH +  
413.748 MWH banking of previous

month

= 827.496 MWH

#### **Monthly Energy Account during For paddy season (August)**

Banked energy carried forward from previous months = 827.496 MWH

Total monthly chargeable consumption from PSPCL= 2940 MWH

Energy banked during the month = 413.748 MWH

Limit of banked energy allowed to be carried forward to next month= 882 MWH

Banked Energy to be carried forward to next month = Minimum of (882 and 413.748) MWH +  
827.496 MWH of previous month

= 1241.244 MWH

#### **Monthly Energy Account during For paddy season (September)**

Banked energy carried forward from previous months = 1241.244 MWH

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

Total monthly chargeable consumption from PSPCL= 2940 MWH

Energy banked during the month = 413.748 MWH

Limit of banked energy allowed to be carried forward to next month= 882 MWH

Banked Energy to be carried forward to next month = Minimum of (882 and 413.748) MWH +  
1241.244 MWH of previous month  
= 1654.992 MWH

**Monthly Energy Account during For non-paddy season (October)**

Banked energy carried forward from previous months = 1654.992 MWH

Energy banked during the month = 413.748 MWH

Total chargeable consumption from PSPCL (after adjustment of Banked Energy)  
= 2940-413.748-1654.992  
= 871.26 MWH

Net balance of Banked Energy to be carried forward to next month = Nil

**Monthly Energy Account during For non-paddy season (November to March)**

Banked energy carried forward from previous months = Nil

Energy banked during the month = 413.748 MWH

Total chargeable consumption from PSPCL (after adjustment of Banked Energy)  
= 2940-413.748  
= 2526.252 MWH

Net balance of Banked Energy to be carried forward to next month = Nil

**Banked Energy lapsed during any month = Nil**

**Banked Energy lapsed at end of march (end of FY) = Nil**

**(B) Scenario 2 (Injected Energy > Consumed/ Drawn Energy)**

Say Actual Energy Injection of Intra-State RE Generator (supplying power to Green Energy Open Access Consumer under Intra-State Open Access) in  $i^{\text{th}}$  time-block ( $E_{gi}$ ) = 10 MW

Energy available for Drawl by Green Energy Open Access Consumer in  $i^{\text{th}}$  time-block

$$\begin{aligned} (E_{di}) &= \{E_{gi} (1-T\&D \text{ Losses}-\text{Transmission \& Wheeling charges}^*)\} \\ &= 10 \times (1-2.46\%-2\%) \\ &= 10 \times 0.9554 \end{aligned}$$

$$= 9.554 \text{ MW}$$

Or Say Scheduled Energy by Inter-State RE Generator (supplying power to Green Energy Open Access Consumer under Inter-State Open Access) at Punjab State Periphery in  $i^{\text{th}}$  time-block ( $E_{gi}$ ) = 9.795 MW

Energy available for drawl by Green Energy Open Access Consumer in  $i^{\text{th}}$  time-block

$$(E_{di}) = \{E_{gi} (1 - \text{T\&D Losses})\}$$

$$= 9.795 \times (1 - 2.46\%)$$

$$= 9.795 \times 0.9754$$

$$= 9.554 \text{ MW}$$

Say T&D Losses = 2.46 % (considering both RE Generator and Green Energy Open Access Consumer connected to Intra-State transmission system at 132 kV)

Transmission & Wheeling Charges = 2 % of energy injection schedule

Say Actual Total Energy consumption/ drawl of Green Energy Open Access Consumer in  $i^{\text{th}}$  time-block ( $E_{ci}$ ) = 3 MW

Unutilized Energy available for banking in  $i^{\text{th}}$  time-block =  $E_{di} - E_{ci}$

$$= 9.554 - 3$$

$$= 6.554 \text{ MW}$$

Banked Energy in  $i^{\text{th}}$  time-block = Unutilized Energy available for banking  $\times (1 - B)$

$$= 6.554 \times (1 - 10\%) \quad (\text{Banking Charges @}$$

10%)

$$= 5.8986 \text{ MW}$$

Say the RE Generator is a solar based generating station and each day is divided in different parts/ time-slots depending on the Solar Generation profile and Peak Load/ Off-Peak Load hours :-

#### **Slot 1: Maximum Solar Generation during Off-Peak Hours (6 Hours)**

Say the actual energy injection, consumption and banked energy shall remain same as above for these 6 no. peak solar hours

Energy available for Drawl =  $9.554 \times 6 = 57.324 \text{ MWH}$

Actual Total Energy Consumption/ Drawl =  $3 \times 6 = 18 \text{ MWH}$

Consumption from PSPCL = NIL (as Total Consumption < Energy Available for Drawl)

Banked Energy =  $5.8986 \times 6 = 35.3916 \text{ MWH}$

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

**Slot 2: Lower Solar Generation during Off-Peak Hours (6 Hours)**

Say the actual energy injection is less than 7 MW (ranging between 1 to 7 MW,  
and Total Energy available for drawl = 28 MWH

Actual Total Energy consumption/ drawl =  $3 \times 6 = 18$  MWH

Consumption from PSPCL = NIL (as Total Consumption < Energy Available for Drawl)

Banked Energy =  $(28-18) \times (1-10\%) = 9.0$  MWH

**Slot 3: No Solar generation during Off-Peak Hours (8 Hours)**

Energy Available for Drawl = NIL

Actual Total Energy consumption/ drawl =  $3 \times 8 = 24$  MWH

Consumption from PSPCL =  $3 \times 8 = 24$  MWH

Banked Energy = NIL (as Total Consumption > Energy Available for Drawl)

**Slot 4: No Solar generation during Peak Hours (4 Hours)**

Energy Available for Drawl = NIL

Actual Total Energy consumption/ drawl =  $3 \times 4 = 12$  MWH

Consumption from PSPCL =  $3 \times 4 = 12$  MWH

Banked Energy = NIL (as Total Consumption > Energy Available for Drawl)

**The Daily Energy Account shall be as under**

Daily Energy Available for Drawl by Green Energy Open Access Consumer = Total of all 4 slots =  $57.324 + 28 + 0 + 0 = 85.324$  MWH

Daily Total of Actual Consumption/ Drawl = Total of all 4 slots =  $18 + 18 + 24 + 12 = 72$  MWH

Consumption from PSPCL during off-peak hours = Total of Slot 1 to 3 =  $0 + 0 + 24 = 24$  MWH

Consumption from PSPCL during peak hours = Total of Slot 4 = 12 MWH

Banked Energy = Total of all 4 slots =  $35.3916 + 9 + 0 + 0 = 44.3916$  MWH

Say the daily details are same for each day of the month, the total for the month (30 days)/**Monthly Energy Account shall be as under:-**

Monthly Energy Available for Drawl by Green Energy Open Access Consumer =  $30 \times 85.324 = 2559.72$  MWH

Monthly Total of Actual Consumption/ Drawl =  $30 \times 72 = 2160$  MWH

Monthly Consumption from PSPCL during off-peak hours =  $30 \times 24 = 720$  MWH

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

Monthly Consumption from PSPCL during peak hours =  $30 \times 12 = 360$  MWH

Banked Energy =  $30 \times 44.3916 = 1331.748$  MWH

**Monthly Energy Account during For non-paddy season (April)**

Banked energy carried forward from previous months = Nil

Total Chargeable Consumption from PSPCL (after adjustment of Banked Energy) = Zero  
(since total consumption of  $(720+360=1080)$  MWH is less than total banked power of 1331.748 MWH)

Net balance of Banked Energy remaining at end of month

$$= (1331.748 - 1080) = 251.748 \text{ MWH}$$

Limit for Banked Energy allowed to be carried forward to next month

$$= 30\% \text{ of consumption from PSPCL}$$

$$= 30\% \text{ of } (1080) = 324 \text{ MWH}$$

Banked Energy carried forward to next month = Minimum of 251.748 & 324

$$= 251.748 \text{ MWH}$$

**Monthly Energy Account during For non-paddy season (May)**

Banked energy carried forward from previous months = 251.748 MWH

Energy banked during the month = 1331.748 MWH

Total Chargeable Consumption from PSPCL (after adjustment of Banked Energy) = Zero

Net balance of previous month Banked Energy remaining at end of month = Zero

Net balance of Current month Banked Energy remaining at end of month =

$$1331.748 - (1080 - 251.748) = 503.496 \text{ MWH}$$

Limit for Banked Energy allowed to be carried forward to next month

$$= 30\% \text{ of consumption from PSPCL}$$

$$= 30\% \text{ of } (1080) = 324 \text{ MWH}$$

Banked Energy carried forward to next month = (Minimum of 503.496 & 324) MWH

$$= 324 \text{ MWH}$$

**Monthly Energy Account during paddy season (June)**

Banked energy carried forward from previous months = 324 MWH

Total Chargeable consumption from PSPCL = 1080 MWH

Energy banked during the month = 1331.748 MWH

Limit for Banked Energy allowed to be carried forward to next month

$$= 30\% \text{ of } 1080 = 324 \text{ MWH}$$

$$\begin{aligned} \text{Banked Energy carried forward to next month} &= (\text{Minimum of } 1331.748 \text{ \& } 324) + 324 \text{ MWH} \\ &= 648 \text{ MWH} \end{aligned}$$

#### **Monthly Energy Account during paddy season (July)**

$$\text{Banked energy carried forward from previous months} = 648 \text{ MWH}$$

$$\text{Total Chargeable consumption from PSPCL} = 1080 \text{ MWH}$$

$$\text{Energy banked during the month} = 1331.748 \text{ MWH}$$

$$\text{Limit for Banked Energy allowed to be carried forward to next month}$$

$$= 30\% \text{ of } 1080 = 324 \text{ MWH}$$

$$\begin{aligned} \text{Banked Energy carried forward to next month} &= (\text{Minimum of } 1331.748 \text{ \& } 324) + 648 \text{ MWH} \\ &= 972 \text{ MWH} \end{aligned}$$

#### **Monthly Energy Account during paddy season (August)**

$$\text{Banked energy carried forward from previous months} = 972 \text{ MWH}$$

$$\text{Total Chargeable consumption from PSPCL} = 1080 \text{ MWH}$$

$$\text{Energy banked during the month} = 1331.748 \text{ MWH}$$

$$\text{Limit for Banked Energy allowed to be carried forward to next month}$$

$$= 30\% \text{ of } 1080 = 324 \text{ MWH}$$

$$\begin{aligned} \text{Banked Energy carried forward to next month} &= (\text{Minimum of } 1331.748 \text{ \& } 324) + 972 \text{ MWH} \\ &= 1296 \text{ MWH} \end{aligned}$$

#### **Monthly Energy Account during paddy season (September)**

$$\text{Banked energy carried forward from previous months} = 1296 \text{ MWH}$$

$$\text{Total Chargeable consumption from PSPCL} = 1080 \text{ MWH}$$

$$\text{Energy banked during the month} = 1331.748 \text{ MWH}$$

$$\text{Limit for Banked Energy allowed to be carried forward to next month}$$

$$= 30\% \text{ of } 1080 = 324 \text{ MWH}$$

$$\begin{aligned} \text{Banked Energy carried forward to next month} &= (\text{Minimum of } 1331.748 \text{ \& } 324) + 1296 \text{ MWH} \\ &= 1620 \text{ MWH} \end{aligned}$$

#### **Monthly Energy Account during For non-paddy season (October)**

$$\text{Banked energy carried forward from previous months} = 1620 \text{ MWH}$$

$$\text{Energy banked during the month} = 1331.748 \text{ MWH}$$

$$\text{Total Chargeable Consumption from PSPCL (after adjustment of Banked Energy)} = \text{Zero}$$

Net balance of previous month Banked Energy remaining at end of month = 1620-1080  
= 540 MWH

Net balance of Current month Banked Energy remaining at end of month =  
1331.748 MWH

Limit for Banked Energy allowed to be carried forward to next month  
= 30% of consumption from PSPCL  
= 30% of (1080)= 324 MWH

Banked Energy carried forward to next month = (Minimum of 1331.748 & 324) + 540 MWH  
= 864 MWH

#### **Monthly Energy Account during For non-paddy season (November)**

Banked energy carried forward from previous months = 864 MWH

Energy banked during the month = 1331.748 MWH

Total Chargeable Consumption from PSPCL (after adjustment of Banked Energy) = Zero

Net balance of previous month Banked Energy remaining at end of month = Zero

Net balance of Current month Banked Energy remaining at end of month =  
1331.748-(1080-864)= 1115.748 MWH

Limit for Banked Energy allowed to be carried forward to next month  
= 30% of consumption from PSPCL  
= 30% of (1080)= 324 MWH

Banked Energy carried forward to next month = (Minimum of 1115.748 & 324) MWH  
= 324 MWH

#### **Monthly Energy Account during For non-paddy season (December)**

Banked energy carried forward from previous months = 324 MWH

Energy banked during the month = 1331.748 MWH

Total Chargeable Consumption from PSPCL (after adjustment of Banked Energy) = Zero

Net balance of previous month Banked Energy remaining at end of month = Zero

Net balance of Current month Banked Energy remaining at end of month =  
1331.748-(1080-324)= 575.748 MWH

Limit for Banked Energy allowed to be carried forward to next month  
= 30% of consumption from PSPCL  
= 30% of (1080)= 324 MWH

Banked Energy carried forward to next month = (Minimum of 575.748 & 324)

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

= 324 MWH

**Monthly Energy Account during For non-paddy season (January)**

Banked energy carried forward from previous months = 324 MWH

Energy banked during the month = 1331.748 MWH

Total Chargeable Consumption from PSPCL (after adjustment of Banked Energy) = Zero

Net balance of previous month Banked Energy remaining at end of month = Zero

Net balance of Current month Banked Energy remaining at end of month =

$1331.748 - (1080 - 324) = 575.748$  MWH

Limit for Banked Energy allowed to be carried forward to next month

= 30% of consumption from PSPCL

= 30% of (1080) = 324 MWH

Banked Energy carried forward to next month = (Minimum of 575.748 & 324)

= 324 MWH

**Monthly Energy Account during For non-paddy season (February)**

Banked energy carried forward from previous months = 324 MWH

Energy banked during the month = 1331.748 MWH

Total Chargeable Consumption from PSPCL (after adjustment of Banked Energy) = Zero

Net balance of previous month Banked Energy remaining at end of month = Zero

Net balance of Current month Banked Energy remaining at end of month =

$1331.748 - (1080 - 324) = 575.748$  MWH

Limit for Banked Energy allowed to be carried forward to next month

= 30% of consumption from PSPCL

= 30% of (1080) = 324 MWH

Banked Energy carried forward to next month = (Minimum of 575.748 & 324)

= 324 MWH

**Monthly Energy Account during For non-paddy season (March)**

Banked energy carried forward from previous months = 324 MWH

Energy banked during the month = 1331.748 MWH

Total Chargeable Consumption from PSPCL (after adjustment of Banked Energy) = Zero

Net balance of previous month Banked Energy remaining at end of month = Zero

Net balance of Current month Banked Energy remaining at end of month =

$$1331.748 - (1080 - 324) = 575.748 \text{ MWH}$$

Limit for Banked Energy allowed to be carried forward to next month

$$= 30\% \text{ of consumption from PSPCL}$$

$$= 30\% \text{ of } (1080) = 324 \text{ MWH}$$

**Banked Energy lapsed at end of March (End of FY)**

$$= \text{(Minimum of 575.748 \& 324)}$$

$$= \text{324 MWH}$$

11.12 The additional open access transactions, if any, by Intra-State RE Generator (supplying power to Green Energy Open Access Consumer) for Sale of Power, besides the Green Energy Open Access transaction (for which banking is applicable), shall be scheduled and accounted for in line with the provisions of applicable regulations {e.g. F&S Regulations (for solar/ wind generators located within the State with individual capacity/ capacity of pooling station 5 MW & above) or DSM Regulations (for other generators located within the State with capacity above 5 MW connected with Intra-State Transmission System) or as per Open Access Regulations (if not covered under F&S or DSM regulations)}, after adjusting/ accounting for the Intra-State Wheeling transaction schedule (for which banking is applicable).

Provided that the injection for inter-state open access transactions by the solar/ wind generators located within the State (with individual capacity/ capacity of pooling station 5 MW & above) shall be on separate feeder as the scheduling, accounting and deviation settlement of such transactions shall be separate, in line with the provisions of F&S Regulations.

11.13 The additional open access transactions, if any, by the Green Energy Open Access Consumer for purchase of power, besides the Green Energy Open Access transaction (for which banking is applicable), shall be scheduled and accounted for in line with the provisions of open access regulations, after adjusting/ accounting for the Green Energy Open Access schedule (for which banking is applicable).

11.14 SLDC shall be responsible for accounting of Banked power. The energy statement shall be forwarded by SLDC to concerned commercial/ IT wing of PSPCL (responsible for billing of concerned GEOA consumer), which shall use it for the purpose of preparation and issuing of bills. In case of multiple connections, before start of Green Energy Open Access Consumer(s) shall intimate to PSPCL in advance regarding the percentage share of energy generation from the Renewable Energy projects to each connection which shall be used for computation of banked energy. Based on energy statement issued by SLDC, action shall be taken by PSPCL/PSTCL as under: -

- a) The applicable open access charges for STOA/MTOA/LTOA shall be billed by PSPCL/PSTCL/SLDC as per applicable PSERC Open Access Regulations as amended from time to time.
- b) Concerned Commercial/ IT wing of PSPCL (responsible for billing of concerned GEOA consumer) shall compile statement (based upon the adjustment sheet prepared by SLDC) showing scheduled Green Energy under Open Access / Actual Green Energy drawn by Green Energy Open Access Consumer, banked energy, energy consumed in current month, PSPCL energy, amount in rupees payable etc. The finalized banking adjustment sheet shall be forwarded to SLDC for keeping record of the banking power transactions.

#### **12. Security Deposit:**

The CGP/ captive user(s) shall submit a security deposit to PSPCL at the time of open access application or banking application, whichever is earlier, In line with the provisions of “detailed procedure for verification of Captive Generating Plant (CGP) status” approved by the Commission, which shall be encashed by PSPCL in case CGP fails to meets the criteria for captive status, for whatever reasons. Failure to submit/ reinstate Security Deposit within prescribed time limit, the banking of power shall not be allowed. Facility of banking will be withdrawn in case the security deposit is not maintained.

#### **13. Events of Default:**

The occurrence of any of the following events at any time by the Green Energy Open Access Consumer, during the term of this Agreement shall constitute an Event of Default:

- a. Failure or refusal by the Green Energy Open Access Consumer to perform any of its obligations agreed under this Agreement.
- b. Non-payment of charges or non-payment/non-maintenance of security as specified in this agreement within the time specified.
- c. Failure to establish status of Captive Generating Plant in any contract year (in case GEOA Consumer is a captive user wheeling power from RE based RE based CGP for captive use).
- d. Submission of fake, fabricated or misleading document(s), certificate(s), undertaking(s) etc.
- e. Tempering of metering equipment.

#### **14. Termination of Banking Agreement:**

- i) Upon the occurrence of any event of default as set out in clause 13 above, PSPCL may deliver a Default Notice of 15 days to the Green Energy Open Access Consumer in writing, which shall specify in reasonable detail the event of default giving rise to the default notice and call upon the Green Energy Open Access Consumer to remedy the same within a month from the date of notice.

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

- ii) In case the Green Energy Open Access Consumer fails to remedy the default(s) notified in the above Notice within the time indicated in the notice, PSPCL shall be entitled to terminate the banking agreement with immediate effect.
- iii) Upon termination of banking agreement, PSPCL shall stand discharged of all its obligations undertaken under the agreement. However, the Parties shall fulfill the payment obligations arising as per the agreement prior to the date of termination.
- iv) On termination of contract by PSPCL, Banked units for that particular period shall be lapsed and no compensation shall be provided. Further, in case of failure to establish status of Captive Generating Plant (in case of Green Energy Open Access Consumers wheeling power from RE based CGP for captive use) in any contract year for whatever reason, security deposit shall also be forfeited.

#### **15. Redressal Mechanism:**

Any dispute in scheduling, metering, energy accounting including banking shall be first referred to the Commercial & Metering Committee (CMC) formulated under State Grid Code. All users shall abide by the decision of CMC.

The Committee shall investigate and endeavor to resolve the grievance within 30 days after affording opportunity of hearing to all the affected parties. If the Committee is unable to redress the grievance, it shall be referred to the Commission by the Committee. In case the Green Energy Open Access Consumer is dissatisfied with the decision of the committee; it may approach the Commission through a petition. Pending the decision of the commission, the directions of the CMC/ SLDC shall be complied with by the Green Energy Open Access Consumer.

The disputes pertaining to billing between PSPCL and Green Energy Open Access Consumer, other than those falling in the jurisdiction of CMC, shall be referred to the Appropriate Grievances Forum of PSPCL.

#### **16. Removal of difficulties:**

In case of any difficulty in implementation of this procedure, the affected party may approach the Commission for review or revision of the procedure with requisite data. In case of any dispute between these Procedures and Open Access Regulations, the later shall supersede these procedures and will be applicable.

#### **17. General:**

- i. All costs/expenses/ charges associated with the application shall be borne by the applicant.
- ii. The Green Energy Open Access Consumer shall abide by the provisions of the Electricity Act, 2003, the PSERC Regulations and Indian Electricity Grid Code and PSERC (State Grid Code) Regulation - 2013, and applicable CERC and PSERC regulations as amended from time to time.
- iii. PSPCL/PSTCL shall not be liable for any losses/ damages, if any, consequent to any line

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

outage between the point of generation and the injection point for any reason whatsoever, consequent to which power is not evacuated.

- iv. This procedure aims at outlining conditions and steps to streamline and facilitate the process of banking. However, some teething problems may still be experienced. The various implications would be known only after practical experience is gained by way of implementing these procedures. In order to resolve the same, this procedure shall be reviewed or revised by PSPCL with approval of Commission.

**\*Note :- Peak period shall be as per Tariff Order of the respective years or otherwise , however for the purpose of illustration it has been assumed as 1<sup>st</sup> June to 30<sup>th</sup> September.**

**Application format for Banking**

## 1) Particular of RE Generator supplying power to Green Energy Open Access Consumer

- i) Capacity of plant in MW:
- ii) Type of Fuel:
- iii) Location of the plant:
- iv) Interconnection Voltage:
- v) Date of commissioning of project:
- vi) Contact Details:
- vii) Substation / point where energy is injected:
- viii) Validity of Open Access:
- ix) Schedule date of commencement of wheeling of power:

## 2) Capacity to be wheeled/ banked in MW

## 3) Particular of Green Energy Open Access Consumer :

- i) Name of Consumer:
- ii) Category:
- iii) Contact Demand:
- iv) Subdivision:
- v) Supply Voltage:
- vi) Quantum of power to be wheeled:
- vii) Contact Details:

## 4) Metering Details:

- i) At Generator End:
- ii) At Consumer End:

Validation: -

I, undertake by the terms and conditions of Banking/Wheeling of power as set out in PSERC (Terms & Conditions for Intra-State Open Access) Regulations, 2011, as amended from time to time and the details mentioned above are true & correct.

(Signature of the Applicant)

(Green Energy Open Access Consumer)

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

**UNDERTAKING TO BE GIVEN BY APPLICANT (Green Energy Open Access Consumer)**

Name: M/s\_\_\_\_\_ (Name of Applicant),

Postal address)\_\_\_\_\_

(To be provided by the State Entity on a stamp paper attested by Notary Public)

1. I/We, as a Green Energy Open Access Consumer, will be regulated by PSERC (Terms & Conditions for Intra-State Open Access) Regulations, 2011, as amended from time to time.
2. I/ We qualify as a Captive User of our RE based CGP in terms of Rule 3 of Electricity Rules, 2005 and under Section 9 read with clause (8) of section 2 of the Electricity Act, 2003. I / We will ensure obligation as captive user in line with the provisions of Electricity Rules, 2005 and Electricity Act, 2003 (Applicable for Captive users only).
3. I/ We 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 (Applicable for Captive users only).
4. I/We agree to comply with the provisions of “detailed procedure for verification of Captive Generating Plant (CGP) status” approved by the Commission (Applicable for Captive users only).
5. I/ We agree that in case the if I/We fail to fulfil the conditions to qualify as captive user in a particular financial year, the entire electricity wheeled by us from our RE based CGP 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 user. The total energy banked and utilized by the captive user during the year in such case shall be treated as dumped power(Applicable for Captive users only).
6. I/We agree that the banked energy above 30% of total monthly consumption of electricity from the PSPCL shall be treated as dumped energy and shall not be carried forward to next month.
7. I/We will be responsible to ensure healthiness of metering equipment during the period of schedule/ injection of power and will inform SLDC about defect/ change in metering equipment within 24 hrs of such defect coming to notice/ change of metering equipment.

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

In absence of timely receipt of such information from us, I/We will be responsible for any loss to PSPCL/ PSTCL on this account.

8. I/We shall establish a round the clock Control Center and shall be responsible for control of its Generation/Drawal. The Control Centre shall have facilities of voice communication with SLDC with voice recording facilities, Fax machine and internet connection available for all the 24 hours.
9. I/We agree to provide and meet with all metering, protection and communication requirements, as specified by the Commission/PSPCL/PSTCL from time to time.
10. I/We will ensure compliance of the State Grid Code, Indian Electricity Grid Code and regulations and procedure approved by PSERC & CERC, 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.
11. I/We (if an obligated entity under RPO Regulation) shall ensure compliance under PSERC (Renewable Purchase Obligation and its Compliance) Regulations, 2011, as amended from time to time.
12. I/We agree to accept the decision of Commercial & Metering Committee & Appropriate Commission (CERC/PSERC).
13. I/We agree to bear any loss to PSPCL incurred on account of misrepresentation/ concealment of facts by me/us.
14. I/We will comply any additional conditions imposed by PSPCL in line with the Relevant Regulations issued by PSERC/ CERC.

I/We undertake all operational and commercial responsibilities as per the prevalent PSERC Regulations and are agreeing for the above terms and conditions for registering as CGP/ Captive User with PSPCL.

Details of Payment Security is enclosed

(Signatures, Name and Postal address of Applicant (Green Energy Open Access Consumer))) \_\_\_\_\_

\_\_\_\_\_

Declaration: All that is stated in the above is true and correct.

**Note: Copy of Board Resolution of Authorized Signatory/ Power of attorney/ Authorization Letter in respect of signing authority to be enclosed.**

## Annexure-2

**MODEL BANKING AGREEMENT between PSPCL, PSTCL and Green Energy Open Access  
Consumer**

This Banking Agreement is made and entered into at Patiala on \_\_\_ day of \_\_\_\_ of \_\_\_\_

**BETWEEN**

**Punjab State Power Corporation Limited**, a Company formed and incorporated under the Companies Act, 1956, with its registered office located at PSEB H.O. Building, The Mall, Patiala (hereinafter referred to as "**PSPCL**" which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators and permitted assigns),

**AND**

**Punjab State Transmission Corporation Limited**, a Company formed and incorporated under the Companies Act, 1956, with its registered office located at PSEB H.O. Building, The Mall, Patiala (herein after referred to as the "**PSTCL**" which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators and permitted assigns),

**AND**

**M/s \_\_\_\_\_**, a Green Energy Open Access Consumer in the State of Punjab at \_\_\_\_\_, incorporated under the relevant act (Companies Act or Partnership act or any other act, as the case may be) as the case may be and having its Registered Office at..... hereinafter referred to as the "**Company**" (which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators, Intra-State RE generator (from whom green power is being availed and permitted assigns) as parties.

**WHEREAS:**

- i) The PSPCL is Distribution Licensee engaged in the business of electricity distribution in the State of Punjab and PSTCL (Punjab State Transmission Corporation Ltd.) i.e. State Transmission Utility (STU) engaged in the business of electricity transmission in the State of Punjab. Both PSPCL and PSTCL are under a statutory obligation to provide non-discriminatory open access to its transmission/ distribution system under the provisions of the Electricity Act, 2003. The Company is a Green Energy Open Access Consumer with Sanctioned Load/ Contract demand of \_\_\_ MW/ MVA, located at \_\_\_\_\_ and connected to the distribution/ Intra-State transmission system of the PSPCL/ PSTCL through \_\_\_ kV line to \_\_\_ kV Sub Station \_\_\_\_\_ of PSPCL/PSTCL and have executed the Open Access Agreement/ Approval dated \_\_\_\_\_ executed with/ issued by PSTCL/SLDC to transmit/wheel upto \_\_\_ MW power from \_\_\_\_\_  
\_ under intra-state / inter-state open access:-

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

- ii) The New and Renewable Energy Department, Govt. of Punjab/ Punjab Energy Development Agency (PEDA), vide its Memo No. \_\_\_\_\_ dated \_\_\_\_\_ has accorded sanction to the proposal of the Company for installation of Renewable Energy (RE) based Generating Plant of \_\_\_\_ MW capacity at \_\_\_\_\_, which is connected with the Intra-State Transmission or Distribution System at \_\_\_\_ KV Voltage Level through PSPCL/ PSTCL sub-station \_\_\_\_\_ (applicable only for Intra-State RE Generators supplying power to Green Energy Open Access Consumer).
- iii) The Company is desirous of availing the banking facility in respect of power up to \_\_\_\_ MW, (surplus power transmitted/wheeled from its source/ RE generator), by utilizing the transmission and/ or distribution network of the PSTCL/ PSPCL and for the said purpose intends to enter into a Banking Agreement with the PSPCL/ PSTCL subject to the Terms and Conditions as set out in this agreement.

**NOW THEREFORE IN VIEW OF THE FOREGOING PREMISES AND IN CONSIDERATION OF THE MUTUAL COVENANTS AND CONDITIONS HEREINAFTER SET FORTH, THE PSPCL/ PSTCL AND THE COMPANY, HEREBY AGREE AS FOLLOWS:**

## **ARTICLE 1**

### **1.1 DEFINITIONS**

For the purposes of this Agreement, unless the context otherwise requires, the following words and expressions shall have the respective meanings set forth below:

- i. **“Act”** means the Electricity Act, 2003 (36 of 2003);
- ii. **“Banking”** means the means the energy scheduled and injected into the grid and credited with the distribution licensee which shall be drawn later, on such terms and conditions as may be approved by the Commission in its Open Access Regulations;
- iii. **“Banking Charges”** means percentage deduction made in kind from the energy banked or charges in Rs./kWh levied on banked energy, towards banking charges, as approved by the Commission from time to time.
- iv. **“Billing cycle”** means a period of one month;
- v. **“Contract Demand”** means the maximum demand in kVA sanctioned to a consumer;
- vi. **“Central Commission (CERC)”** means Central Electricity Regulatory Commission referred to in subsection (1) of Section 76 of the Act.
- vii. **“Commission” or “PSERC”** means the Punjab State Electricity Regulatory Commission referred to in subsection (1) of section 82 of the Act;
- viii. **“Company”** means a company formed and registered under the Companies Act, 1956 and includes anybody corporate under a Central, State or Provincial Act;
- ix. **“Contracted Capacity”** means capacity, for which open access has been granted to the Green Energy Open Access Consumer for transmission/ wheeling.

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

- x. **“Conventional Fuel”** means any fossil fuel such as coal, lignite etc.;
- xi. **“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;
- xii. **“Deviation Charges”** means the Charges for Deviation as specified by the Commission from time to time;
- xiii. **“Deviation Settlement Mechanism”** means and include the framework for energy accounting, deviation accounting, rules for pricing of deviation(s) payable and receivable by the State entities and other design parameters as specified under Punjab State Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2020 and/or Punjab State Electricity Regulatory Commission (Forecasting, Scheduling, Deviation Settlement and Related Matters of Solar and Wind Generation Sources) Regulations, 2019, as amended from time to time;
- xiv. **“Drawl Point”** means the interface point at which the wheeled/banked power shall be drawn by Green Energy Open Access Consumer and metering shall be done.
- xv. **“DSM Regulations”** means Punjab State Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2020, as amended from time to time.
- xvi. **“F&S Regulations”** means Punjab State Electricity Regulatory Commission (Forecasting, Scheduling, Deviation Settlement and Related Matters of Solar and Wind Generation Sources) Regulations, 2019, as amended from time to time.
- xvii. **“Financial Year”** means year starting from 1<sup>st</sup> day of April of a calendar year and ending on the 31<sup>st</sup> day of March of the following calendar year
- xviii. **“Full Open Access Consumer”** shall mean Open Access Consumer connected to transmission system or distribution system but not having any contract demand with the distribution licensee within the state;
- xix. **“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;
- xx. **“Green Energy”** means the electrical energy from renewable sources of energy including hydro storage (if the storage uses renewable energy) or any other technology as may be notified by the Government of India from time to time and shall also include any mechanism that utilizes green energy to replace fossil fuels including production of green hydrogen or green ammonia as per provision of the Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules,2022;
- xxi. **“Green Energy Open Access”** means the open access allowed to a consumer including captive user for carrying electricity from green energy source as per

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

provisions of Open Access Regulations read with the Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022;

- xxii. **“Green Energy Open Access Consumer”** means any consumer of PSPCL who has sanctioned contracted demand of 100kVA or more either through single connection or through multiple connections aggregating to 100 kVA or more located in the same electricity division of a distribution licensee or such other limit as may be specified by Commission from time to time, except for captive consumers, who are supplied with electricity from green energy sources for their own use by a licensee or the Government or by any other person engaged in the business of supplying electricity to the public under this Act or any other law for the time being in force and includes any person whose premises are for the time being connected for the purpose of receiving green energy with the works of a licensee, the Government or such person, as the case may be;
- xxiii. **“Grid Code” (or “SGC”)** means the Grid Code specified by the Commission under clause (h) of subsection (1) of Section 86 of the Act;
- xxiv. **“Imbalance Charges”** means the deviation charges stipulated for open access customers under Regulation 31 of Open Access Regulations.
- xxv. **“Indian Electricity Grid Code” (or “IEGC”)** means the Grid Code specified by the Central Electricity Regulatory Commission under Section 79(1)(h) of the Act;
- xxvi. **“Infirm Power”** means power injected in to the grid by an RE generator which is not committed and is not covered under any contract with the distribution licensee.
- xxvii. **“Injected Energy”** means the kilowatt hour (kWh) of electricity actually exported and measured by the energy meters at the Injection Point.
- xxviii. **“Injection Point”** means the interconnection point at which power to be transmitted/ wheeled to Green Energy Open Access Consumer shall be injected by the RE Generator.
- xxix. **“Installed Capacity”** means the capacity of the Project at the generating terminal(s).
- xxx. **“Interface Meters or Special Energy Meters (SEM)”** means interface/ SEM meters as defined by the Central Electricity Authority under the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, as amended from time to time;
- xxxi. **“Interface Point” or “Interconnection Point”** means the interface of Intra-State RE generator with the network of distribution or transmission licensee (PSPCL/PSTCL) and interface of Green Energy Open Access Consumer with the network of distribution or transmission licensee (PSPCL/PSTCL).

- xxxii. **“Licensee”** means a person who has been granted a licence under section 14 of the Act;
- xxxiii. **“Load Despatch Centre”** means National Load Despatch Centre, Regional Load Despatch Centre or State Load Despatch Centre, as the case may be, responsible for coordinating, scheduling of the Buyers and the Sellers in accordance with the provisions of Grid Code;
- xxxiv. **“Metering Point”** for purposes of recording of Injected Energy at the Injection Point and recording consumption at the drawl point, which shall include ABT/SEM ( Special Energy Meters) as specified in the PSERC(Terms and Conditions for Open Access) Regulations, 2011 and State Grid Code, as amended from time to time and in accordance with the CEA (Installation and Operation of Meters) Regulations, 2006 (as amended from time to time) with the facilities to record both export and import of electricity to/from the transmission/distribution network of license and to communicate its readings to State Load Dispatch Centre on real time basis or as specified by the Commission.
- xxxv. **“Non-Paddy Season”** means lean period of the year, other than paddy season/ peak seasonal period approved by the Commission;
- xxxvi. **“Off-Peak hours”** means period of the day, other than Peak hours/ Peak Load Hours approved by the Commission.
- xxxvii. **“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;
- xxxviii. **“Paddy Season”** means peak seasonal period as stipulated by the Commission in the Open Access Regulations;
- xxxix. **“Partial Open Access Consumer”** shall mean Open Access Consumer connected to the transmission system or distribution system and having his contract demand with the distribution licensee within the state;
- xl. **“Peak hours”** means Peak Load Hours period of the day, as approved by the Commission from time to time;
- xli. **“Person”** shall include any company or body corporate or association or body of individuals, whether incorporated or not, or artificial juridical person;
- xlii. **“PSPCL”** means Punjab State Power Corporation Limited, a successor company of the erstwhile Punjab State Electricity Board (PSEB), notified as the Distribution Licensee (discom) by Government of Punjab and entrusted with the work of Generation and Distribution business of erstwhile PSEB.
- xliii. **“PSTCL”** means Punjab State Transmission Corporation Limited, a successor company of erstwhile Punjab State Electricity Board (PSEB), notified as State

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

Transmission Utility (STU) by Government of Punjab and entrusted with the work of transmission business of erstwhile PSEB and responsibility to operate the SLDC.

- xliv. **“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;
- xlv. **“Renewable Energy (RE) Source”** means renewable energy source approved by MNRE such as solar, wind, biomass, bagasse, municipal solid waste and other such sources;
- xlvi. **“Scheduled Entitlement”** for any open access customer means the schedule approved by the SLDC for that Open Access customer in a particular time block. Provided that for the purpose of computation of Banked Energy for a Green Energy Open Access consumer availing Intra-State Open Access, scheduled entitlement will be the energy available for drawal at consumer end i.e. actual energy injected minus losses minus transmission and wheeling charges.
- xlvii. **“Standby contract demand”** means the maximum demand in kVA contracted by the Green Energy Open Access Consumer under Standby power agreement with the distribution licensee of his area of supply;
- xlviii. **“Standby power”** means the power required in case an Open Access customer is unable to procure/ draw power from open access source due to outage of generator with whom he has the agreement to procure power or failure of transmission/distribution system;
- xlix. **“Startup contract demand”** means the maximum demand in kVA contracted by the RE Generator under Startup power agreement with the distribution licensee of his area of supply;
  - i. **“Startup power”** means the power required in case of Startup, at the pre-commissioning stage or after a planned/ forced outage;
  - ii. **“State Entity”** means such person who is in the SLDC control area and whose metering and energy accounting is done at the state level;
  - iii. **“State Load Despatch Centre”(or “SLDC”)** means the Load Despatch Centre of the State established under sub section (1) of section 31 of the Act, responsible for co-ordinating scheduling of the state entities in accordance with the provisions of State Grid Code;
  - liii. **“Time-Block”** means a time block of 15 minutes or any such shorter duration as may be notified by the Commission, for which specified electrical parameters and quantities are recorded by a special energy meter, with the first time block starting at 00.00 hours;

Any words and expressions used but not defined in this Agreement shall have the same meaning as defined in the Act, PSERC Regulations and the Grid Code. A reference to any Regulation shall include its amendment or subsequent re-enactment if any.

Unless otherwise stated, all references made in this Agreement to “Articles” and “Schedules” shall refer, respectively, to Articles of and Schedules to this Agreement. The Schedules to this Agreement shall form part of this Agreement and shall be in force and effect as though they were expressly set out in the body of this Agreement.

**ARTICLE-2****CONNECTIVITY AND OPEN ACCESS AGREEMENTS**

**2.1** The interconnection/Connectivity between the Intra-State RE Generator (intending to supply power to Green Energy Open Access consumer) and / or premises of the Green Energy Open Access consumer shall be as per the Feasibility Clearance granted by PSPCL/ PSTCL, as the case may be. The power shall be drawn by the Green Energy Open Access consumer at \_\_\_\_kV from \_\_\_\_\_ at \_\_\_\_\_ Substation of the PSPCL/PSTCL.

The company shall give prior information to PSPCL regarding location and its consumer category where banked power is intended to be used within the State of Punjab.

**2.2** The parties shall be bound by the conditions of the Feasibility Clearance dated \_\_\_\_\_ and Open Access Agreement/ Approval (as applicable) dated \_\_\_\_\_ executed between the parties, which will be an integral part of this Banking agreement.

This Banking Agreement shall remain valid upto the validity of Open Access Agreement/ Approval, or as may be mutually agreed by the parties.

**2.3** The Company shall ensure that the metering and protection facility be opened for inspection by the authorized representative of the PSPCL/PSTCL as and when required.

**ARTICLE 3****CHARGES**

- 3.1** The Green Energy Open Access Consumer shall be allowed to bank power with PSPCL subject to the condition that 10% of power banked or as may be decided by the Commission from time to time, shall be deducted (in kind) towards banking charges.
- 3.2** Besides banking charges, the Green Energy Open Access Consumer, shall be liable to pay to PSPCL the following charges:
- a) For the energy drawn from the PSPCL, the consumer shall pay as per tariff applicable for the category as approved by the commission from time to time.
  - b) In case, the recorded drawal of a GEOA consumer exceeds the admissible drawal or sanctioned contract demand as the case may be, the consumer will be liable to pay demand surcharge on daily basis as per the applicable Schedule of Temporary supply for relevant category.
  - c) The open access charges corresponding to the contracted capacity, as approved by PSERC in PSERC (Terms & Conditions for Intra-State Open Access) Regulations, 2011, as amended from time to time and tariff related order(s) issued from time to time.
  - d) Any other charges, as specified in PSERC (Terms & Conditions for Intra-State Open Access) Regulations, 2011, as amended from time to time, shall also be applicable.
- 3.3** The Green Energy Open Access Consumer, seeking to avail banking facility, shall avail open access for the total quantum of power to be drawn from RE generator, including the maximum possible quantum of power to be banked and the following open access charges shall be levied accordingly in line with the provisions of Open Access Regulations:-
- (i) Transmission Charges, Wheeling Charges and SLDC Charges:-**
  - (ii) Cross-Subsidy Surcharge:-**
  - (iii) Additional Surcharge:-**
    - iii) Standby Charges:-**
    - iv) Other Charges**
- 3.4** The Energy Banked shall be permitted to be carried forward from month to month. The permitted quantum of banked energy to be carried forward to next month shall be upto 30% the total monthly consumption of electricity from PSPCL. The excess energy banked shall be treated as dumped energy and shall not be carried forward to next month.

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

The banked power shall be utilized within the same financial year failing which the unutilized banked energy at the end of the financial year shall lapse, and no compensation whatsoever shall be claimed/ paid for such lapsed banked energy. Provided that the unutilized surplus power/ lapsed banked energy shall be governed as per the provisions of Electricity (Promoting Renewable Energy Through Green Energy Open Access) Amendment Rules, 2023 and all relaxation(s) and benefit(s) given to the GEOA consumers under GEOA Amendment Rules, 2023, including entitlement of the RE based CGP Renewable energy certificates to the extent of lapsed banked energy will automatically be applicable to GEOA consumers..

### **3.5 Energy Losses:**

Loss of Energy in wheeling/transmission shall be calculated as per the technical losses determined by the Commission for the relevant year.

3.6 The Company shall also be liable to pay, in case of default by Green Energy Open Access Consumer, partly or fully, any open access charges, or any other charges based on the bills raised by PSPCL/ PSTCL/ SLDC.

3.7 In case of Green Energy Open Access Consumer wheeling power for captive use from RE Generator RE based CGP), it shall comply with the provisions of “detailed procedure for verification of Captive Generating Plant (CGP) status” approved by the Commission by submitting the requisite documentary evidence to the verifying authority/ agency and submitting the certification of verifying authority/ agency for last/ previous year to PSPCL. Besides this, the Company shall be required to submit any additional documents/information which may be required by PSPCL to satisfy itself regarding captive status of the plant. In case, the Company fails to comply with the requirement to qualify the Captive Status during any contract year/financial year for whatever reason, the Company/captive user shall be liable to pay all applicable charges for the said year, from which it was having exemption on account of its claimed CPP status. Further, Banked units, if any, shall stand lapsed and no compensation shall be provided.

**ARTICLE- 4****BANKING OF ENERGY****4.1 WHEELING:**

**4.1.1** The Company, in case open access is required for wheeling of power to the designation of its use, shall apply for grant of Open Access to the nodal agency in line with the Open Access Regulations and Procedures approved by Hon'ble PSERC, indicating the quantum of power to be wheeled from its Source/ RE Generator.

**4.1.2** PSPCL reserves the right to withdraw the facility of banking either wholly or partly in case of any breach of conditions of this agreement or under force majeure conditions. In such an event, PSPCL shall not be liable to pay any compensation or damages to the Company.

**4.2 BANKING:****i) Terms and conditions for Banking:**

A Green Energy Open Access Consumer connected to the Intra-state transmission system/distribution system, may bank power on payment of the following charges applicable for use of transmission and/or distribution network of PSTCL and/or PSPCL:

- a) Banking charges as per the agreement.
  - b) Open Access Charges as per PSERC (Terms & Conditions for Intra-State Open Access) Regulations, 2011, as amended from time to time.
  - c) Any other charges, as specified by the Commission.
- ii) The Transmission and distribution losses (Technical losses) shall be applicable as notified by Commission for year to year. The power shall be allowed to be banked with PSPCL subject to the condition that 10% of power banked (in kind) shall be deducted toward banking charges.
- iii) The banking shall be allowed throughout the year, however, the drawl of banked power shall not be allowed during the peak seasonal/ period and also during peak load hours, as may be approved by the Commission in the Tariff Order of the respective years or otherwise.
- iv) The permitted quantum of banked energy to be carried forward to next month shall be upto 30% the total monthly consumption of electricity from the distribution licensee of the area. The excess energy banked shall be treated as dumped energy and shall not be carried forward to next month. The banked power shall be utilized within the same financial year failing which the unutilized energy at the end of the financial year shall lapse, and no compensation whatsoever shall be claimed/ paid for such lapsed banked energy. Provided that the unutilized surplus power as per the

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

provisions of Electricity (Promoting Renewable Energy Through Green Energy Open Access) Amendment Rules, 2023) and all relaxation(s) and benefit(s) given to the GEOA consumers under GEOA Amendment Rules, 2023, including entitlement of the RE based CGP Renewable energy certificates to the extent of lapsed banked energy will automatically be applicable to GEOA consumers.

- v) Metering and communication facilities along with associated AMR system shall be provided and maintained by the Company at its own cost in accordance with the provisions of this agreement.
- vi) The Green Energy Open Access Consumer shall be governed by State Grid Code, IEGC read along with regulations and procedures approved by PSERC and CERC from time to time without prejudice to the terms and conditions of this agreement.
- vii) In case of Green Energy Open Access Consumer wheeling power s for captive use from Intra-State RE Generator (RE based CGP), it shall comply with the provisions of “detailed procedure for verification of Captive Generating Plant (CGP) status” approved by the Commission by submitting the requisite documentary evidence to the verifying authority/ agency and submitting the certification of verifying authority/ agency for last/ previous year to PSPCL.

It shall be the obligation of the captive user (Green Energy Open Access Consumer) 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 and requisite documentary evidence is submitted to the verifying authority/ agency for certification of captive status.

If the Captive User (Green Energy Open Access Consumer) fails to meet the criteria of ownership and consumption specified in Rule 3 of Electricity Rules 2005 (amended from time to time), by the end of the year, such CGP or Captive User shall lose its Captive status for that year leading to imposition of various charges as applicable to Non-Captive Green Energy Open Access consumers. Further, in case the GEOA consumer is wheeling energy for captive use, the total energy banked and utilized by the captive user during the year shall be treated as infirm power injected in to the grid by CGP and shall be treated as dumped power. The energy drawn from the grid by the captive user (Green Energy Open Access Consumer) 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.

In such cases of captive use, the Company shall also pay and maintain, security deposit in line with the provisions of “detailed procedure for verification of Captive Generating Plant (CGP) status” approved by the Commission. Facility of banking will be withdrawn in case the security deposit is not maintained. The security deposit shall be encashed in case the Company fails to qualify the Status of Captive Generating Plant during any contract year/financial year

*Detailed Banking procedure in accordance with the PSERC (Terms and Conditions for Intra State Open Access) Regulations, 2011, as amended from time to time)*

viii) The Intra-State RE Generator (supplying power to Green Energy Open Access Consumer under Intra-State Open Access), shall furnish its generation schedule to SLDC/PSPCL as per Punjab State Grid Code read along with Punjab State Electricity Regulatory Commission (Forecasting, Scheduling, Deviation Settlement and Related Matters of Solar and Wind Generation Sources) Regulations, 2019, PSERC (Deviation Settlement Mechanism & related matters) Regulations, 2020 & PSERC (Terms & Conditions for Intra-State Open Access) Regulations, 2011, as amended from time to time read along with detailed procedure approved by the Commission under these regulations, showing its from the following:-

1. Power to be sold through Open Access (transaction-wise)
2. Power to be sold to PSPCL.

ix) The Energy available for Drawl by Green Energy Open Access Consumer availing Intra-State Open Access (drawing power from Source/ RE generator within the State) and Banked Energy shall be worked out by SLDC as under:-

**Banked Energy in each time block:**

$$(E_{bi}) = \{E_{gi} (1 - T\&D \text{ Losses} - \text{Transmission \& Wheeling charges} *) - E_{ci}\} \times (1 - B)$$

\* *Transmission and wheeling charges as approved by the Commission from time to time (presently @ 2% of energy injected).*

Where

$E_{bi}$  = Banked Energy in  $i^{\text{th}}$  time-block

$E_{gi}$  = Actual Energy injected by Intra-State RE Generator in  $i^{\text{th}}$  time-block

Provided that in case of multiple GEOA Consumers availing power from a single Intra-State RE generator,  $E_{gi}$  shall be the Actual Injection of Intra-State RE generator apportioned to the concerned GEOA Consumer based on percentage share of energy generation of such GEOA consumer from Intra-State RE generator.

Provided further that in case the Intra-State RE generator is having multiple open access transactions for sale/ captive use of power,  $E_{gi}$  shall be apportioned based on percentage share of energy generation depending on the injection schedule for each such transaction

$E_{ci}$  = Energy consumption in  $i^{\text{th}}$  time-block

$B$  = Banking charges (in kind) @ 10%

The Energy available for Drawl by Green Energy Open Access Consumer availing Inter-State Open Access (drawing power from Source/ RE generator outside the

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State) and Banked Energy shall be worked out by SLDC as under:-

**Banked Energy in each time block:**

$$(E_{bi}) = \{E_{gi} (1-T\&D \text{ Losses}) - E_{ci}\} \times (1-B)$$

Where

- E<sub>bi</sub> = Banked Energy in i<sup>th</sup> time-block  
 E<sub>gi</sub> = Open Access Drawl Schedule of Green Energy Open Access Consumer at Punjab State periphery in i<sup>th</sup> time-block,  
 E<sub>ci</sub> = Energy consumption in i<sup>th</sup> time-block  
 B = Banking charges (in kind) @ 10%

Note: 1. Above calculation shall be made keeping in view the restrictions on drawl of banked power during the months/ hours.

2. Losses are the transmission losses and distribution losses (Technical losses) as approved by the PSERC in its Tariff Order for the relevant financial year.

3. Banked Energy is zero if E<sub>b</sub> is negative or zero

4. The previous balance of banked energy (carried forward from last month) shall be adjusted at the end of month.

xvii) The green power from RE generator shall be adjusted as first charge in order of consumption of energy by Green Energy Open Access consumer. Settlement of wheeled energy consumed at Green Energy Open Access consumer end shall be in the following priority:

(i) RE/ Green Energy drawn from RE Generator

(ii) Banked Energy

(iii) Power purchased under Open Access, if any (other than green energy)

(iv) Power drawn from PSPCL.

xviii) The accounting/ adjustment of banked energy shall be done by SLDC as per clause 11 of the banking procedure by considering the energy unutilized by the Green Energy Open Access Consumer during each time-block, as banked energy, after deducting in-kind banking charges. Provided that the monthly banked energy to be carried forward, in excess of 30 % of monthly consumption of electricity of Green Energy Open Access Consumer from PSPCL shall be considered as dumped energy in line with the provisions of PSERC (Terms & Conditions for Intra-State Open Access) Regulations, 2011, as amended from time to time. The consumption of the Green Energy Open Access consumer from PSPCL (during non-paddy period) shall be settled/ adjusted by PSPCL against the banked energy accumulated upto the end of the month. Provided that the banked energy carried forward from previous month(s)

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shall be adjusted first and in case there is remaining unutilized energy after adjustment, the same shall not be subject to the 30% capping while carrying forward to next month.

- xix) At the end of a month, the total RE power consumption during the month, the total RE Power adjusted during the month, RE Power adjusted from the previous banked energy during the month and net banked energy for the month shall be worked out by SLDC from the time slot wise energy statement prepared by SLDC, Punjab with the downloaded meter data.
- xx) SLDC shall prepare every month, the accounts of scheduled and actual green energy drawl by Green Energy Open Access consumer. The monthly energy accounts shall be prepared by SLDC as per the provisions of Regulations issued by Hon'ble PSERC from time to time and shall be sent to all concerned for the purpose of monthly billing.
- xxi) Based on time slot wise actual energy statement, action shall be taken by PSPCL/PSTCL as under:-
  - a) The applicable open access charges for STOA/MTOA/LTA shall be billed by PSPCL/PSTCL/SLDC as per applicable PSERC Open Access Regulations as amended from time to time.
  - b) Commercial/ IT wing of PSPCL (responsible for billing of concerned GEOA consumer) shall compile statement (based upon the adjustment sheet prepared by SLDC) showing scheduled/ actual green energy consumption, banked energy, PSPCL energy, amount in rupees payable etc. The finalized banking adjustment sheet shall be forwarded to SLDC for keeping record of the banking power transactions.

**ARTICLE - 5****METERING, TESTING AND COMMUNICATION****5.1 Metering:**

- a) The Intra-state RE generator (intending to supply power to Green Energy Open Access Consumer) connected to the intra-state transmission and/or distribution system shall provide ABT compatible Main & Check Special Energy Meters (SEM) of accuracy class 0.2S at the interconnection point between Intra-State RE Generator and the licensee for recording and storing all the load survey & billing parameters (including both import and export of energy) for every 15-minutes time blocks and 5 minutes or lesser time block (preferably configurable) averages of all the Electrical Parameters for a minimum of 45 days, 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, Open Access Regulations and Procedures.

Similarly, the Green Energy Open Access Consumer connected to the intra-state transmission and/or distribution system shall provide ABT compatible Main Special Energy Meter (SEM) of accuracy class 0.2S at the interconnection point between Green Energy Open Access Consumer along with and the licensee for recording and storing all the load survey & billing parameters (including both import and export of energy) for every 15-minutes time blocks and 5 minutes or lesser time block (preferably configurable) averages of all the Electrical Parameters along with voltage differentiated measurement of reactive energy for a minimum of 45 days, 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, Open Access Regulations and Procedures approved by the Commission. The Distribution licensee may provide Check Meters of the same specification as Main Meters.

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.

- b) The metering equipment installed shall be as per PSPCL's latest technical specification or its amendment from time to time and shall comply with the CEA metering regulations and CEA guidelines on Advanced metering infrastructure.
- c) Cost of metering and communication facilities shall be borne by the Intra-State RE Generator/ Green Energy Open Access Consumer. Each meter i.e. at injection point, drawl point(s) and at the generation facility shall be tested by Meter testing laboratory

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of PSPCL and witnessed/sealed jointly by concerned field office of PSPCL in the presence of the authorized representative(s) of the Intra-State RE Generator/Green Energy Open Access Consumer at the cost of Intra-State RE Generator/Green Energy Open Access Consumer and shall not be interfered with by either party except in the presence of either party or its authorized representative. In the case of any tampering of metering cubicle or energy meters at the Project/Intra-State RE Generator/Green Energy Open Access Consumer premises, this agreement shall be terminated.

- d) All the main and check meters shall be periodically tested for accuracy/ RTC time-drift in line with the provisions of State Grid Code and CEA Metering Regulations. The cost of such test checking shall be borne by the Intra-State RE Generator/Green Energy Open Access Consumer at the rates specified by the PSPCL from time to time.

Format of downloaded data of ABT compliant meters shall be as per format of PSPCL latest technical specification or its amendment from time to time also considering requirements of SLDC.

- e) In case of defective main meters, the assessment of consumption shall be done on the basis of check/ standby meters in line with the provisions of State Grid Code.
- f) The downloaded data of the SEM/ ABT meters for the previous month for power injected by the Intra-State RE Generator and power consumed at the Intra-State RE Generator/Green Energy Open Access Consumer end for the previous month shall be supplied to SLDC, Punjab by 5<sup>th</sup> day of every month until AMR system is established and SAMAST scheme is implemented. Thereafter, SLDC will process the data on the basis of meter data of Intra-State generator and Green Energy Open Access Consumer and prepare time slot wise actual energy statement and adjustment sheet including banked units in the current month.

**5.2 Data Acquisition System [DAS] and Communication facilities:** The Company shall install and maintain at its cost, Data Acquisition System and communication network facilities including AMR system at the Generating Station/Injection Point, as specified in the State Grid Code with due approval of technical features by SLDC or PSPCL as the case may be. The communication facilities shall also comply with the provisions of CERC (Communication System) Regulations, 2017 and SAMAST report/scheme.

The Data Acquisition System and communication network facilities including AMR system at the Generating Station/Injection Point and drawl point shall be provided and maintained by the Intra-State RE generator/ Green Energy Open Access Consumer, as specified in the State Grid Code with due approval of technical features by SLDC or PSPCL as the case may be.

**5.3** In the case of any tampering of metering cubicle or energy meters at the Project/Green Energy Open Access Consumer's premises or at the Intra-State RE Generator's premises being

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detected or observed, the PSPCL shall have the right to withdraw the Banking facilities/Open Access and penalties shall be imposed as per rules/regulations of PSPCL/PSERC and Banked units for that particular period shall be lapsed and no compensation shall be provided.

**ARTICLE – 6****FORCE MAJEURE**

**6.1** In the event of Force Majeure conditions, the PSPCL shall have no obligation to Bank and Wheel the energy as per this agreement. These Force Majeure conditions shall include but not limited to the following:-

- acts of God, including but not limited to lightning, storm, earthquakes, floods, drought and other natural disasters;
- strikes, lockouts;
- acts of public enemy, wars (declared or undeclared), blockades, insurrections, riots, revolution, sabotage, vandalism and civil disturbance;
- unavoidable accident, including but not limited to fire, explosion, radioactive contamination and toxic dangerous chemical contamination;
- any shutdown or interruption of the Grid, which is required or directed by the State or Central Government or by the Commission or the State/Regional Load Despatch Centre; and
- any shut down or interruption, which is required to avoid serious and immediate risks of a significant plant or equipment failure;

However, all reasonable efforts shall be made to restore normalcy within 30 (thirty) days and if the same is not possible, this agreement is to be treated as temporarily suspended for the period in which Force Majeure conditions continue and in such case the PSPCL shall also make efforts to supply power to Green Energy Open Access Consumer from its own source subject to availability and payment of charges as applicable to the power supplied to the relevant category of consumers.

**6.2** During the period in which Force Majeure conditions prevail, PSPCL shall not be liable to pay any compensation or damage or any claims whatsoever for any direct or indirect loss that may be suffered by the Green Energy Open Access Consumer/ company on account of wheeling and/or Banking of Electricity not being performed during the period.

**6.3** In case PSPCL on account of any force majeure conditions or breakdown of Grid/ transmission/ distribution lines are not in a position to evacuate/ wheel the power from Intra-State RE Generator, then PSPCL shall not be liable to pay any compensation or damage or any other claims whatsoever for any direct or indirect loss to the Company, other than banking of power admissible for open access consumers in case of failure of intra-state transmission/ distribution system of licensee feeding the consumer, as per the provisions of Open Access Regulations. PSPCL shall not also be liable to pay any compensation for any damage caused to any part of the Project resulting on account of parallel operation of the grid.

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**ARTICLE – 7****TERM, TERMINATION AND DEFAULT****7.1 Term of the Agreement:**

This Agreement shall become effective upon the execution and delivery thereof by the Parties hereto and unless terminated pursuant to other provisions of the Agreement, shall continue to be in force till \_\_\_\_\_ i.e. a period of \_\_\_\_ years from the date of commencement of open access i.e. \_\_\_\_\_ not exceeding the validity of Open Access Agreement/approval or earlier as mutually agreed by the parties, which may be extended/renewed for a further period by PSPCL based on the request of company.

**7.2 Events of Default:**

Company's Default: The occurrence of any of the following events at any time during the term of this Agreement shall constitute an Event of Default by the Company:

- a. Failure or refusal by the Company or Green Energy Open Access Consumer to perform any of its obligations agreed under this Agreement.
- b. Non-payment of charges or non-payment/non-maintenance of security as specified in this agreement within the time specified.
- c. Failure to establish status of Captive Generating Plant in any contract year (applicable for Green Energy Open Access Consumers wheeling power for captive use from RE based CGP).
- d. Submission of fake, fabricated or misleading document(s), certificate(s), undertaking(s) etc.
- e. Tempering of metering equipment.

**7.3 Termination:****Termination for Company's Default:**

- i) Upon the occurrence of any event of default as set out in sub-clause 7.2 above, the PSPCL may deliver a Default Notice of 15 days to the Company in writing, which shall specify in reasonable detail the event of default giving rise to the default notice and call upon the Company to remedy the same within a month from the date of notice.
- ii) In case the Company fails to remedy the default(s) notified in the above Notice within the time indicated in the notice, the PSPCL shall be entitled to terminate this Agreement with immediate effect.
- iii) Upon termination of this agreement, the PSPCL shall stand discharged of all its obligations undertaken under this Agreement. However, the Parties shall fulfill the payment obligations arising as per the Agreement prior to the date of termination.
- iv) On termination of contract by PSPCL, Banked units for that particular period shall be lapsed and no compensation shall be provided. Further in case of failure to establish

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status of Captive Generating Plant in any contract year for whatever reason, security deposit shall also be forfeited (applicable for Green Energy Open Access Consumers wheeling power for captive use from RE based CGP).

**ARTICLE 8****DISPUTE RESOLUTION**

- 8.1** The Parties to this agreement hereby agree to attempt to resolve all disputes arising hereunder promptly, equitably and in good faith.
- 8.2** All disputes or differences between the Parties arising out of or in connection with this Agreement shall, as far as possible, be settled through mutual negotiations.
- 8.3** Each Party shall designate in writing and communicate to the other Party its own representative who shall be authorized to resolve any dispute arising under this Agreement in an equitable manner and, unless otherwise expressly provided herein, to exercise the authority of the Parties hereto to make decisions by mutual agreement.
- 8.4** Any dispute in scheduling, metering, energy accounting including billing shall be first referred to the Commercial & Metering Committee (CMC) formulated under State Grid Code. All users shall abide by the decision of CMC.

The Committee shall investigate and endeavor to resolve the grievance within 30 days after affording opportunity of hearing to all the affected parties. If the Committee is unable to redress the grievance, it shall be referred to the Commission by the Committee. In case the Green Energy Open Access Consumer is dissatisfied with the decision of the committee, it may approach the Commission through a petition. Pending the decision of the commission, the directions of the CMC/ SLDC shall be complied with by the Green Energy Open Access Consumer.

The disputes pertaining to billing between PSPCL and Green Energy Open Access Consumer, other than those falling in the jurisdiction of CMC, shall be referred to the Appropriate Grievances Forum of PSPCL.

**ARTICLE - 9****OTHER OBLIGATIONS**

- 9.1** The Company shall abide by the Electricity Act, 2003, PSERC(Punjab State Grid code) Regulations 2013 as amended from time to time, PSERC (Electricity Supply Code and Related Matters) Regulations 2014, as amended from time to time, PSERC(Forecasting, Scheduling, Deviation Settlement and related matters) Regulations, 2019, (Deviation Settlement Mechanism & related matters) Regulations, 2020 and PSERC (Terms & Conditions for Intra-State Open Access)Regulations, 2011, as amended from time to time, Rules, Codes, procedures and Standards made there under.
- 9.2** Quality of power supplied by the Intra-State RE Generator (supplying power to Green Energy Open Access Consumer) shall be in-compliance with the relevant Regulations issued by the PSERC from time to time.
- 9.3** The Company shall strictly comply with the CEA (Safety requirements for construction, operation and maintenance of electrical plants and lines) Regulations, 2011 and CEA (Measures relating to safety and electricity supply) Regulations, 2010, as amended from time to time.
- 9.4** The Company shall pay any applicable taxes, cess, duties or levies imposed by the Government or Competent Authority from time to time.
- 9.5** The Company shall furnish when required, any data necessary for the system studies conducted by the PSPCL.
- 9.6** The cost of Stamp Duty charges shall be borne by the Company.

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**ARTICLE - 10****MISCELLANEOUS PROVISIONS****10.1 Governing Law:**

This Agreement shall be interpreted, construed and governed by the Laws of India including the Electricity Act, 2003 and the Rules/ Regulations framed there under.

**10.2 Waivers:**

Any failure on the part of a Party to exercise, and any delay in exercising, exceeding three years, any right hereunder shall operate as a waiver thereof. No waiver by a Party of any right hereunder with respect to any matter or default arising in connection with this Agreement shall be considered as a waiver with respect to any subsequent matter of default.

**10.3 Limitation, Remedies and Damages:**

Neither Party shall be liable to the other for any consequential, indirect or special damages to persons or property whether arising in tort, contract or otherwise, by reason of this Agreement or any services performed or undertaken to be performed hereunder.

**10.4 Notices:**

Any notice, communication, demand, or request required or authorized by this Agreement shall be in writing and shall be deemed properly given upon the date of receipt, if delivered by hand or sent by courier, if mailed by registered or certified mail at the time of posting, if sent by fax when dispatched (provided if the sender's transmission report shows the entire fax to have been received by the recipient and only if the transmission was received in legible form),

## i) In case of PSPCL:

Designation of authorized representative:

PSPCL Punjab State Power Corporation Ltd.

Telephone No.:

E-mail:

## ii) In case of the Company:

Designation of authorized representative:

Telephone No.:

E- mail:

**10.5 Severability:**

Any provision of this Agreement, which is prohibited or unenforceable under any law, shall be ineffective to the extent of such prohibition or unenforceability without invalidating the

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remaining provisions hereof and without affecting the validity, enforceability or legality of such other provisions.

**10.6 Amendments:**

This Agreement shall not be amended, changed, altered, or modified except by a written instrument duly executed by the authorized representatives of both the Parties and approved by the Commission. However, the Commission shall be entitled to modify/alter the conditions of this contract [agreement] at the instance of either of the parties, or suo-moto, after giving an opportunity of hearing to all the parties.

**10.7 Assignment:**

The Company shall not assign this Agreement or any portion hereof without the prior written consent of the PSPCL and approval of the Commission.

Provided further that any assignee shall expressly assume in writing the assignor's obligations arising under this Agreement prior to the assignment.

**10.8 Entire Agreement, Appendices:**

This Agreement constitutes the entire agreement between PSPCL and the Company, concerning the subject matter hereof. All previous documents, undertakings, and agreements, whether oral, written, or otherwise, between the Parties concerning the subject matter hereof are hereby cancelled and shall be of no further force or effect and shall not affect or modify any of the terms or obligations set forth in this Agreement, except as the same may be made part of this Agreement in accordance with its terms, including the terms of any of the appendices, attachments or exhibits. The appendices, attachments and exhibits are hereby made an integral part of this Agreement and shall be fully binding upon the Parties.

In the event of any inconsistency between the text of the Articles of this Agreement and the appendices, attachments or exhibits hereto or in the event of any inconsistency between the provisions and particulars of one appendix, attachment or exhibit and those of any other appendix, attachment or exhibit, PSPCL and the Company shall mutually consult to resolve the inconsistency however without prejudice to the provisions of the Act, Rules and Regulations made there under.

**10.9 Further Acts and Assurances:**

Each of the Parties agrees to execute and deliver all such further agreements, documents and instruments, and to do and perform all such further acts and things, as shall be necessary or convenient to carry out the provisions of this Agreement and to consummate the transactions contemplated hereby.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Agreement to be executed by their authorized representatives and copies delivered to each Party, as of the day and year first above stated.

**FOR AND ON BEHALF OF PSPCL**

Name:

Designation of authorized representative:

**WITNESSES**

1.

2.

**FOR AND ON BEHALF OF PSTCL**

Name:

Designation of authorized representative:

**WITNESSES**

1.

2.

**FOR AND ON BEHALF OF THE COMPANY**

Name:

Designation of authorized representative:

**WITNESSES**

1.

2.