Uttar Pradesh Electricity Regulatory Commission

Notification No.: UPERC/Secretary/CRE Regulations/ 2019/

Dated: 04/04/2019

In exercise of powers conferred under section 181 read with section 9, 61, 86(1)(a), 86(1)(b) and 86(1)(e) of the Electricity Act, 2003, and all other powers enabling in this behalf, the Uttar Pradesh Electricity Regulatory Commission hereby makes the following Regulations, namely:

UPERC (Captive and Renewable Energy Generating Plants) Regulations, 2019

(CRE Regulations, 2019)

CHAPTER - 1

PRELIMINARY

1. Short Title and commencement

1. These Regulations shall be called the UPERC (draft Captive and Renewable Energy Generating Plants) Regulations, 2019 (hereinafter referred to as CRE Regulations, 2019).

2. These Regulations shall be reckoned to have come into force from 1 April, 2019 and shall remain in force up to 31 March, 2024 unless reviewed earlier or extended by the Commission.

3. Words and expressions used in these Regulations and not defined herein but defined in the Electricity Act, 2003 (hereinafter referred to as 'the Act'), as amended from time to time, shall have the meaning as assigned to them under the Act.

2. Scope and extent of application

1. These Regulations shall apply to captive generation, renewable sources for generation and co-generation.

2. The provisions of Availability Based Tariff (hereinafter referred to as 'ABT') in respect to functions, duties and obligations, as applicable to conventional generation plants shall apply to these Generating Plants also, unless provided otherwise in some other Regulations.

3. For Generating Plants commissioned on or after 1.04.2009, where the

Generating Plant/Company has adopted Clean Development Mechanism (CDM), the proceeds of carbon credit from approved CDM project shall be shared in the following manner, namely:

a. 100% of gross proceeds on account of CDM shall be retained by the project developer during the first year of commercial operation of the Generating plants.

b. During the second year of commercial operation, the share of the procurer shall be 10% which shall progressively increase by 10% every year till it reaches 50%, where-after the proceeds shall be shared in equal proportion, by the Generating Company and the procurer.

4. Annual Energy Audit of each Generating Plant shall be compulsory under relevant provisions of Energy Conservation Act, 2001, as amended from time to time.

5. The Generating Plant / Company shall abide by obligations cast on it by orders of the Central / State Commission issued from time to time in respect of promotion of Renewable Energy Sources.

6. The Generating Plant/Company shall abide by the provisions of the Act, Rules, Codes, Regulations, Orders and Directions of the appropriate Authority / Commission issued from time to time regarding generation and evacuation of electricity.

Provided the Commission may appoint a separate independent auditor who, under the supervision of the Commission, would undertake technical and financial audit of the generating station at any time.

7. If any difficulty arises in giving effect to these Regulations, the Commission may, on its own motion or otherwise, by an order and after giving a reasonable opportunity to those likely to be affected by such Order, make such provisions, as may appear to be necessary for removing the difficulty.

3. Tariff determination

The tariff in respect of a Generating Plant under these Regulations shall be applicable to the capacities or the units in respect to which an agreement has been reached between the generating company and the procurer for supply of electricity.

4. Tariff for renewable energy based generating plants

A generic tariff for renewable energy based generating plants other than Bagasse Based Generation, Biomass (Rice Husk Based) Generation Plants, Municipal Solid Waste Based Generation Plants, Biogas Based Generation Plants, Biomass Gasifier Based Generation Plants, Small Hydro Generation Plants, Solar Power Generation Plants and Wind Power Generation Plants is given in Schedule II (F) of these Regulations.

Provided that for any renewable energy technology approved by MNRE other than those covered under these Regulations, the tariff may be determined by the Commission on case to case basis on receipt of an application for this purpose.

Provided also that the tariff given in Schedule II (F) shall also be applicable to generating plants based on non-conventional sources of energy (other than RE sources recognized by MNRE and not covered under these Regulations), commissioned prior to 1.4.2019 and for whom tariff was earlier determined as per then prevailing Regulations, but shall not be applicable on projects for which the tariff is determined through competitive bidding..

Provided further that in case of fossil fuel based captive generation plant, tariff may be determined by the Commission on case to case basis.

5. Approval of Power Purchase Agreement

The Distribution Licensee shall make an application for approval of Power Purchase Agreement entered into with the Generating Plant in such forms and such manner as prescribed in these Regulations and UPERC (Conduct of Business) Regulations, 2004, notified by the Commission and as amended from time to time.

6. Definitions

1. In these Regulations, unless the context otherwise requires:

   a. **"Act"** means the Electricity Act, 2003 (36 of 2003), including amendments thereto;

   b. **"Auxiliary Energy Consumption"** means the quantum of energy consumed by auxiliary equipment of the generating station and transformer losses within the generating station, and shall be expressed as a percentage of the sum of gross energy generated at the generator terminals of all the units of the generating station;

   c. **"Banking of power"** is the process under which a Generating Plant supplies power to the grid not with the intent of selling it to either a third party or to a Licensee, but with the intention of exercising its eligibility to draw back this power from the grid for its own use as per the conditions provided in these Regulations;

d. **"COD" or "Date of Commercial Operation"** shall mean the date on which the generating plant is synchronized with the grid system and demonstrating the generation capacity as per the terms of the PPA.

e. **"CERC"** means the Central Electricity Regulatory Commission;

f. **"Commission"** means the Uttar Pradesh Electricity Regulatory Commission;

g. **"Contracted Capacity"** means the capacity in MW as agreed to be supplied by the Generating company to a Distribution Licensee under the Power Purchase Agreement;

h. **"Control Period"** means a period during which the principles and norms for determination of tariff specified in these Regulations shall remain valid;

i. **"Existing Generating Station"** means a generating station, which has achieved COD prior to the coming into effect of these Regulations;

j. **"Financial Year"** means a period commencing on 1st April of a calendar year and ending on 31st March of the subsequent calendar year;

k. **"Gross Calorific Value" or "GCV"** in relation to a fuel used in a generating station means the heat produced in kcal by complete combustion of one kilogram of solid fuel or one litre of liquid fuel or one standard cubic meter of gaseous fuel, as the case may be;

l. **"Gross Station Heat Rate" or "SHR"** means the heat energy input in kcal required to generate one kWh of electrical energy at generator terminals of a thermal generating station;

m. **"IEGC"** means the Grid Code specified by the Central Regulatory Commission under clause (h) of sub-section (1) of section 79 of the Act;

n. **"Installed Capacity" or "IC"** means the summation of the name plate capacities of all the Units of the generating station or the capacity of the generating station (reckoned at the generator terminals), approved by the Commission from time to time;

o. **"Inter-connection Point"** means a point at EHV substation of transmission licensee or HV/LV sub-station of distribution licensee, as the case may be, where the electricity produced from the generating station is injected into the Uttar Pradesh Grid;

p. **"Large scale stand-alone Solar projects"** means Solar projects of 5 MW and above capacity.

q. **"MNRE"** means the Ministry of New and Renewable Energy of the Government of India;

r. **"New Generating Station"** means a generating station which achieves COD after coming into effect of these Regulations;

s. **"Operation and Maintenance expenses" or "O&M expenses"** means the expenditure incurred on operation and maintenance of the project, and includes the expenditure on manpower, repairs, spares, consumables, insurance and other overheads of revenue nature;

t. **"Ownership"** in relation to a Generating Station or power plant setup by a company or any other body corporate shall mean the equity share capital with voting rights. In other cases ownership shall mean proprietary interest and control over the Generating Station or power plant;

u. **"Peak Hours / Off Peak Hours"** means the hours declared as such by the State Load Despatch Centre from time to time unless specified by an Order of the Commission;

v. **"Power Purchase Agreement" or "PPA"** means an agreement between a Generating Company and a Distribution Licensee for supply of power on the terms and conditions specified therein and with the provisions that the tariff for sale of power shall be as determined by the Commission from time to time;

w. **"Project"** means a generating station or the evacuation system upto inter-connection point as the case may be and in case of a small hydro generating station includes all components of generating facility such as dam, intake water conductor system, power generating station and generating units of the scheme, as apportioned to power generation;

x. **"Renewable Energy"** means the grid quality electricity generated from Renewable Energy sources;

y. **"Renewable Energy Power Plants"** means the power plants other than the conventional power plants generating grid quality electricity from Renewable Energy sources;

z. **"Renewable Energy Sources"** (hereinafter called 'RE sources') means renewable energy sources such as small hydro, wind, solar, biomass, bio fuel co-generation (including Bagasse based co-generation), urban or municipal solid waste and such other sources as recognized or approved by the MNRE or State Government;

aa. **"RLDC"** means the Regional Load Despatch Centre established under sub-section (1) of section 27 of the Act;

bb. **"SLDC"** means State Load Despatch Centre established in Uttar Pradesh under sub-section (1) of section 31 of the Act;

cc. **"UPEGC"** means the State Grid Code specified under clause (h) of subsection (1) of section 86 of the Act by the Commission;

dd. **"UPERC Open Access Regulations"** means the Uttar Pradesh Electricity Regulatory Commission (Terms and Conditions for Open Access) Regulations, 2009 as amended from time to time;

ee. **"Wheeling"** means the operation whereby the distribution system and associated facilities of a transmission licensee or distribution licensee, as the case may be, are used by another person for the conveyance of electricity on payment of charges to be determined under the Act;

ff. **"Year"** means a financial year.

Words or expressions occurring in these Regulations and not defined shall bear the same meaning as in the Act.

7. Power to Relax

The Commission, for reasons to be recorded in writing, may relax the provisions of these Regulations on its own motion or on an application made before it by any interested party.

CHAPTER - 2

CAPTIVE POWER GENERATION (NON- RENEWABLE ENERGY)

8. Object

As per the provisions of the Act, supply of electricity from a Captive Generating Plant through the grid shall be regulated in the same manner as the Generating Station of a Generating Company. These Regulations seek to achieve efficient, safe, well-coordinated operation of the plant, connectivity with the grid and exchange of information among the various utilities in the State grid, Central Utilities and Northern Regional Grid, as the case may be. Non-compliance of these Regulations shall be liable for action under the appropriate provision of the Act.

9. Generation from Captive Power Plants

1. A power plant shall qualify as a 'Captive Generating Plant', under Section 9 read with Section 2(8) of the Act and Rule 3 of The Electricity Rules, 2005, as amended from time to time.

2. It shall be the obligation of the Captive Users to ensure the captive consumption at the percentages mentioned in the Electricity Rules, 2005 and subsequent amendments thereto. In case the minimum percentage of captive generation is not used for captive purposes in any year, the generating plant shall not be eligible for the benefits of a captive generating plant in that financial year and shall not be governed by the Tariff determined under these Regulations. The Tariff for generation from such plants will have to be separately approved by the Commission on an application filed by the generator and the procurer.

10. General conditions for Captive Generating Plants

1. These Regulations shall apply to all existing Captive Generating Plants as well as proposed Captive Generating Plants having an installed capacity of 1 MW or above irrespective of their connectivity with the grid.

2. Any person intending to set-up a Captive Generating Plant shall submit the detailed project report, scheduled date of commercial operation and half yearly progress report of construction of the plant to the Commission for information and record. The necessary information to be accompanied with the detailed project report shall be as per Annexure 1 of these Regulations:

   Provided that all existing Captive Generating Plants (whether connected with the grid or not) shall furnish the desired information in Annexure 1 and Annexure 3 of these Regulations within 90 days from the date of notification of these Regulations. Non-compliance shall be liable for action under the appropriate provisions of the Act or

Regulations.

3. The provisions of ABT in respect to functions, duties and obligations, as provided for conventional Generating Plants under ABT regime, shall apply to Captive Generating Plants.

4. The Captive Generating Plant shall abide by the grid discipline and shall not be entitled to any compensation in the event of grid failure or any interruptions or damage to the plant or its associated sub-stations or transmission line on account of any happening in the grid.

5. Relevant provisions of these Regulations shall also apply to the captive plants having no connectivity with the grid.

6. The Commission may in its discretion refer any technical matter relating to Generation and Transmission to Central Electricity Authority for examination.

11. Obligations of the Captive Generating Plant

1. The Captive Generating Plant shall establish, operate and maintain Generating Station, Sub- Station, tie lines and dedicated transmission lines connected thereto in accordance with the following:

   a. The technical standards for construction of electrical plants, electric lines and connectivity with the grid as specified by the Authority;

   b. Safety requirements for construction, operation and maintenance of electrical plants and electric lines as specified by the Authority;

   c. Uttar Pradesh Electricity Grid Code (UPEGC) or Indian Electricity Grid Code (IEGC);

   d. The conditions for installation of meters for supply of electricity as specified by the Authority and / or the State Transmission Utility (STU).

12. Duties of the Captive Generating Plant

1. The Captive Generating Plant shall generate electricity primarily for its own use and shall:

   a. Submit the technical details regarding its Generating Stations to the appropriate Commission and the Authority;

   b. Submit information to the Commission in respect to availability, generation achieved, demand met, plant load factor, auxiliary consumption, specific heat rate, specific oil consumption and other information as specified under Annexure 1 & Annexure 3 of

these Regulations;

c. Co-ordinate with SLDC and / or STU for scheduling and despatch of electricity.

2. The plant shall be under obligation to comply with the directions issued to it by SLDC and shall pay fee and charges payable to SLDC as specified by the Commission from time to time.

3. The Captive Generating Plant shall not be required to obtain license under the Act for establishing, operating or maintaining a dedicated transmission line.

4. The Captive Generating Plant shall ensure compliance of all general or specific direction, Rules or Regulations made by the Commission for the generating companies.

5. The Captive Generating Plant shall ensure that the Distribution License has submitted Power Purchase Agreement to the Commission as mentioned in Regulation 16(1) of these Regulations for approval.

13. Open Access

1. A Captive Generating Plant shall have right to 'Open Access' for carrying electricity from its plant to the destination of its use by using transmission and/or distribution system or associated facilities with such lines or system and for this purpose, Rules, Regulations and Orders passed by the appropriate Commission shall apply.

2. The Captive plants seeking 'Open Access' within or outside the State through the grid shall be regulated under Regulations specified by the Appropriate Commission.

14. Transmission charges and wheeling charges

The Plant or the Consumer, seeking 'Open Access' to the State and / or Inter State Transmission Systems and / or distribution system for carrying the electricity to the destination of use, shall pay the transmission charges, wheeling charges and such other charges for use of such facilities as determined by the appropriate Commission(s).

15. Surcharge and Additional Surcharge:

1. A Captive Power plant shall not be liable to pay cross subsidy surcharge but shall be liable to pay the transmission and / or wheeling charges for carrying the generated electricity from its plant to the destination of its own use or for the use of its members:

Provided that in case of supply of power to a consumer or to a person other than its members, such consumer or person shall pay cross

subsidy surcharge over and above transmission and wheeling charges as determined by the Commission. If the energy is supplied to a distribution licensee, no cross subsidy surcharge shall be payable

16. Sale of Power

1. A Captive Generating Plant may enter into an agreement with the Distribution Licensee/procurer for sale of its surplus capacity based on Model PPA available at Annexure 4 to these Regulations. The parties to the agreement may make plant / site specific changes in the Model PPA not inconsistent with the Act and relevant Regulations. Such changes shall however be subject to approval of the Commission:

   Provided that the plant may also supply electricity to a consumer who is permitted open access as per provisions of Open Access Regulations.

2. The Distribution Licensee/procurer shall pay the Open Access charges as specified by the UPERC Open Access Regulations:

   Provided further that Distribution Licensee may require emergency assistance following an extensive failure in the system. Subject to technical feasibility, the Captive Generating Plant may, if requested by the Licensee, extend power supply from its Generating Station to the Licensee's system. In such circumstances, the tariff for such supply shall be mutually agreed.

17. Tariff

The tariff for supply of electricity by a plant at pithead location to a Distribution Licensee shall be as per Schedule I of these Regulations:

Provided that the Commission shall approve the transportation cost of fuel for non-pithead locations on case to case basis on a petition filed by the Generating Plant.

Note:

a. The tariff for supply of electricity from the plant, having more than one unit commissioned in different years, shall be based on weighted average of the contracted capacities of the units commissioned in different years.

b. The tariff for supply of electricity during the period of synchronization and commissioning of the unit shall be equal to the variable cost.

18. Purchase of Electricity

Any person, who establishes, maintains and operates a Generating Plant, may also purchase electricity through Open Access or from Distribution Licensee of his area, to meet the requirement.

Provided that such purchase of electricity, from a Distribution Licensee of the area in which the plant is located, shall be charged under appropriate category of the rate schedule of tariff. This shall apply only to those generators who have entered into PPA with the Distribution Licensee:

Provided also that in case of purchase of power through Open Access, charges shall be payable as determined under UPERC Open Access Regulations:

Provided further that the tariff payable by a captive plant to a Distribution Licensee, in case of banking of energy, shall be as per Regulation 39(2) if that plant has an arrangement of banking of energy with such Distribution Licensee.

19. Capacity of the Plant & Location

1. Captive Generating Plant owner shall clearly mention the capacity of the Plant, Location and fuel linkages in the project report and ensure that Government of India/State Government guidelines regarding use of fuel are complied with.

20. Environmental Clearance

The Captive Generating Plant owner shall abide by the emission standards set by the Union/State Government. The Captive Generating Plant shall obtain all the required environmental and pollution clearances from the Central / State pollution control authorities and submit copies of Clearance Certificates to the Commission.

CHAPTER - 3

RENEWABLE ENERGY SOURCE BASED GENERATION & CO-GENERATION/ CAPTIVE (RENEWABLE)

21. Object

1. These Regulations seek to achieve promotion of generation of electricity from RE sources based generation, facilitate connectivity of RE sources based power plants with the grid, ensure sale of electricity to any person and specify a percentage of the total generated electricity from Renewable sources that shall be purchased by Distribution Licensee of the area in which the plant is located. These Regulations also seek to operate the plant in an efficient, safe and well-coordinated manner ensuring exchange of information among the various utilities in the State grid, Central Utilities and Northern Regional Grid, as the case may be. Non-compliance of these Regulations shall be liable for action under the appropriate provision of the Act.

2. The provisions of Deviation settlement mechanism (DSM) shall be implemented for all RE source based plants, except for Small hydro projects (SHP) and Municipal solid waste (MSW) plants and the Generating Plants shall be subject to day ahead scheduling:

   Provided that for SHP and MSW plants actual energy shall be considered as scheduled energy.

   Provided that DSM for Solar and Wind based plants shall be as per UPERC (Forecasting, Scheduling, Deviation Settlement and related matters of Solar and Wind generation sources) Regulations, 2018.

   Provided that deviation Settlement for Biomass & Bagasse based plants shall be accounted for and settled in accordance with the provisions of the CERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2014 as amended from time to time. The accounting for this purpose shall be done by the SLDC.

   Provided that for Biomass & Bagasse based plants, for recovery of full capacity charges, the PLF on actual or scheduled availability, whichever is lower, shall be 50% of Annual Fixed charges (AFC) which is provided in Schedule II- A and B respectively, of these Regulations. Recovery of capacity (fixed) charges below the level of targeted PLF shall be on *pro rata* basis. At zero PLF, no capacity charges shall be payable. The PLF of Biomass & Bagasse based plants shall be computed on the capacity sold to the Distribution Licensee.

   Provided the payment of capacity charges shall be on monthly basis in proportion to the allocated capacity.

22. Renewable Energy Source based Generation

1. A person may construct, maintain and operate a Generating Plant and a dedicated transmission line for generation and evacuation of electricity from RE source based Generation.

2. The Plant shall deem to be a Generating Company within the meaning of Section 7 of the Act. However, for generation from small hydro, the provisions of Section 8 of the Act shall apply.

3. The Distribution Licensee shall purchase power from all RE sources (except MSW and rooftop solar covered under RSPV Regulations) only through competitive bidding. However, for projects whose tariff was governed by earlier Regulations shall continue to be governed as provided under these Regulations under Schedule II.

   Provided that the tariff given in the Schedule II of these Regulations for different RE sources shall be the ceiling rate.

23. General conditions for Renewable Energy sources based Generation

These Regulations shall apply to:

1. All the Generating Stations existing prior to 01.04.2019 generating electricity from RE sources in the State of Uttar Pradesh as on the date of notification of these Regulations irrespective of their connectivity with the grid or distribution system.

2. All new projects to be commissioned after 01.04.2019 within Uttar Pradesh for generation, captive consumption and sale of electricity from such projects based on RE sources to all distribution licensees within Uttar Pradesh or through Open access to a third party and where tariff, for a generating station or a unit thereof based on RE sources.

   Provided that in case of Wind, Mini/ Micro hydro projects, Small Hydro projects, Biomass power, Non-fossil fuel based generation and Cogeneration projects, Solar PV projects and Wind based power plants these Regulations shall apply subject to the fulfillment of eligibility criteria specified in Regulations 24;

   Provided that in cases where projects based on RE sources opt to adopt REC mechanism formulated under the UPERC (Promotion of Green Energy through Renewable Purchase Obligation) Regulations, 2010, the pricing mechanism for such RE projects shall be governed by the UPERC Regulations.

3. Relevant provisions of these Regulations shall also apply to plants having no connectivity with the grid.

24. Eligibility of Renewable Energy Generating Plants

1. Small hydro project: Small hydro project(s) existing and to be commissioned subsequent to notification of these Regulations and located at the sites approved by State Nodal Agency/State Government using new plant and machinery, and with installed power plant capacity lower than or equal to 25 MW at single location.

2. (a) Biomass power project: Biomass power project(s) using plant and machinery based on Rankine cycle technology and using biomass fuel sources.

   (b) Biomass Gasifier: as approved by MNRE

3. (a) Bagasse based generation and co-generation project: Bagasse based generation and co-generation projects existing and to be commissioned subsequent to notification of these Regulations shall qualify to be termed as a Bagasse based generation and co-generation project. A bagasse based cogeneration shall qualify if it is using plant and machinery and is in accordance with the definition and also meets the qualifying requirement outlined below.

   (b) Topping cycle mode of co-generation: Any facility that uses Bagasse fuel input for power generation and also utilizes the thermal energy generated for useful heat applications in other industrial activities simultaneously.

   Provided that for the co-generation facility to qualify under topping cycle mode, the sum of useful power output and one half the useful thermal output should be greater than 45% of the facility's energy consumption, during season.

   Biogas projects: as approved by MNRE

4. Solar PV and other small Solar power projects: Based on Technologies approved by MNRE.

5. Wind Energy based power plants based on technologies as approved by MNRE

6. Municipal solid waste (MSW) based power plants: Based on Technologies approved by MNRE

25. Capacity of Renewable Energy Generating Plants

1. The optimum capacity of Generating Plant shall be assessed by the Generating Company in the detailed project report in view of potential of electricity generation available with such source.

2. Any person intending to set-up a RE source based Generating Plant shall submit the detailed project report, scheduled date of commercial operation and half yearly progress report of construction of the plant to

the Commission for information and record. The necessary information to be accompanied with the detailed project report shall be as per Annexure 2 of these Regulations:

3. The Commission may in its discretion refer any technical matter relating to Generation and Transmission to Central Electricity Authority for examination.

4. The Generating Plant shall abide by the grid discipline and shall not be entitled for any compensation in the event of grid failure or any interruptions or damage to the plant or its associated sub-stations or transmission line on account of any happening in the grid.

26. Environmental and other Clearances

1. The Generating Plant shall abide by the emission standards, as the case may be, set by the Union/State Government and for that purpose it shall obtain all the required environmental and pollution clearances from the Central / State pollution control authorities and submit copies of Clearance Certificates to the Commission.

2. The Generating Plant shall obtain necessary clearances from Non-conventional Energy Development Agency, U.P.

27. Obligations of Renewable Energy Generating Plants

1. The Generating Plant shall establish, operate and maintain Generating Station, sub-station and dedicated transmission lines connected therewith in accordance with:

   a. The technical standards for construction of electrical plants, electric lines and connectivity with the grid as specified by the Authority.

   b. Safety requirements for construction, operation and maintenance of electrical plants and electric lines as specified by the Authority.

   c. UPEGC or Indian Electricity Grid Code (IEGC).

   d. The conditions for installation of meters for supply of electricity as specified by the Authority or the State Transmission Utility.

2. New generating Plants shall enter into a Power Purchase Agreement with the Distribution Licensee of the area in which the plant is located, in line with the Model Power Purchase Agreement (herein after called Model PPA) available at Annexure 4 to these Regulations or as approved by the Commission. The parties to the agreement may make plant / site specific changes in the Model PPA not inconsistent with the Act, these Regulations and other relevant Regulations. Such changes shall however be subject to approval of the Commission:

Provided that all Power Purchase Agreements signed by the plants existing on the date of notification of these Regulations shall be modified by means of a supplementary agreement to remove any inconsistencies with these Regulations.

28. Duties of Renewable Energy based Generating Plants

1. The Generating Plant shall:

   a. Submit the technical details regarding its Generating Stations to the Appropriate Commission and the Authority;

   b. Submit the information to the Commission in respect to generation, demand met, capacity availability, plant load factor, auxiliary consumption, specific heat rate and other information as specified under Annexure 2 and Annexure 3 of these Regulations;

   c. Co-ordinate with SLDC and / or State Transmission Utility for scheduling and despatch of electricity.

2. The Plant shall be under obligation to comply with the directions issued to it by SLDC and shall pay fee and charges payable to SLDC as specified by the Commission from time to time by order.

3. The Generating Plant shall not be required to obtain license under the Act for establishing, operating or maintaining a dedicated transmission line.

4. The Generating Plant shall ensure compliance of all general or specific direction, Rules or Regulations made by the Commission for the generating companies.

5. The Generating Plant shall ensure that the Distribution Licensee has submitted Power Purchase Agreement to the Commission as mentioned in Regulation 27(2) of these Regulations for approval.

29. Sale of Power

1. All existing RE source based generating plants having PPA approved by the Commission shall be allowed to sell power, to the Distribution Licensee in whose area the plant is located at the rate specified in Schedule II, whereas, for sale of power from new RE capacity (except MSW) to be tied under PPA with Discom shall be at tariff as approved by the Commission through its Orders and under these Regulations:

   Provided that purchases under these Regulations, may be referred to as Renewable Purchase Obligation 'RPO', shall be restricted to quantum as specified under terms and conditions of the UPERC (Promotion of Green Energy through Renewable Purchase Obligation) Regulations, 2010 as amended from time to time:

Provided further that the plant shall be allowed to sell the power to a consumer (third party) at mutually agreed rate:

Provided further that supply to any Distribution Licensee other than the Distribution Licensee of the area in which the plant is located or to any consumer shall be subject to provisions of UPERC Open Access Regulations.

2. Notwithstanding any other provisions of these Regulations, a Distribution Licensee may require emergency assistance following an extensive failure in the system. Subject to technical feasibility, the Generating Plant may, on a request from the Licensee, extend power supply from its Generating Station to the Licensee's system. Under such circumstances, the tariff for supply shall be mutually agreed.

30. Tariff

The tariff for supply of electricity by the RE source based generating plant to a Distribution Licensee shall be as per Schedule II of these Regulations.

Note:

1. The tariff for supply of electricity from the plant, having more than one unit commissioned in different years, shall be based on weighted average of the contracted capacities of the units commissioned in different years.

2. The tariff for supply of electricity during the period of synchronization and the commissioning of the unit shall be equal to the variable cost.

3. However, in case of small hydro plants and other renewable energy based plants, the tariff for supply of electricity during the period of synchronization and the commissioning of unit shall be equal to the 50 percent of the tariff.

4. "Plant Load Factor" shall mean the total sent out energy corresponding to generation during the period expressed as a percentage of sent out energy corresponding to contracted capacity with Distribution Licensee in that period.

$$PLF = \frac{ES \times 1000}{CC \times (100 - AUX) \times 8760}$$

Where,

ES: Energy sold in MU during the year,
CC: Contracted capacity in MW,
AUX: Normative Auxiliary Consumption (i.e. 8.5% for Cogeneration)

31. Open Access

1. A Generating Plant shall have right to 'open access' for carrying electricity from its plant to the destination of its use by using transmission and / or distribution system or associated facilities with such lines or system and for that purpose, Rules, Regulations and Orders passed by the Appropriate Commission shall apply.

2. The plant seeking 'Open Access' within or outside the State through the grid shall be regulated under Regulations specified by the Appropriate Commission.

32. Transmission Charges and Wheeling Charges:

The plant or the consumer, seeking 'Open Access' to the State and / or Inter State Transmission Systems and / or distribution system for carrying the electricity generated by it to the destination of use, shall pay the transmission charges, wheeling charges and such other charges for use of such facilities as determined by the Appropriate Commission(s).

Provided for large scale stand-alone solar projects set up for sale of power to Electricity distribution Company or Third party or Captive use, there shall be exemption of 50% on Wheeling charges/ Transmission charges on Intrastate Sale of Power and 100% exemption on Intrastate Transmission system on Interstate sale of solar power. This exemption will be applicable as per technical feasibility and U.P. Electricity Regulatory Commission (UPERC) Regulations, as amended from time to time.

33. Surcharge and Additional Surcharge:

In case, the power generated form RE source based generating plant is supplied to a consumer then such consumer shall pay charges as per the provisions of UPERC Open Access Regulations .

Provided for large scale stand-alone solar projects set up for sale of power to Electricity distribution Company or Third party or Captive use, there shall be 100 % exemption from State cross subsidy surcharge for Interstate sale of solar power. This exemption will be applicable as per U.P. Electricity Regulatory Commission (UPERC) Regulations, as amended from time to time.

34. Purchase of Electricity by the Plant:

Any person, who establishes, maintains and operates a Generating Plant, may purchase electricity from Distribution Licensee or through Open Access in case his plant is not in a position to generate electricity to meet the requirement:

Provided that in case of RE source based generating stations such purchase of electricity as agreed and declared in PPA, from a Distribution Licensee of

the area in which the plant is located, shall be charged only on actual demand and energy purchased under appropriate category of the rate schedule of tariff. This shall apply only to those generators who have entered into PPA with the Distribution Licensee:

Provided that demand charges for such supply shall be charged for 15 days if the supply is taken for upto 15 days and shall be charged for the month if the supply is taken for more than 15 days.

Provided also that in case of purchase of power through Open Access by the generator, open access charges shall be payable as determined by the Commission under UPERC Open Access Regulations.

Provided further that the tariff payable by a RE source based generating station to a Distribution Licensee, in case of banking of energy, shall be as per Regulation 39(1) if that plant has an arrangement of banking of energy with such Distribution Licensee.

CHAPTER - 4

COMMON TERMS AND CONDITIONS

35. Evacuation of Power

1. The Generating Plant shall supply power to the Distribution Licensee of its area through a 33 KV or higher voltage line terminating at the nearest 132 KV Sub-station as per the voltage and capacity as given below:

   i. Contracted capacity upto 3 MW on 11 KV.

   ii. Contracted capacity above 3 MW and upto 20 MW on 33 KV;

   iii. Contracted capacity above 20 MW on 132 KV;

   The Distribution Licensee or State Transmission Utility shall ensure that the plant is allowed to be connected to the nearest substation in order to control length of line subject to technical feasibility:

   Provided that in case of existing plants, the connectivity shall be the same as existing on the date of these Regulations coming into effect:

   Provided also that in case of plant where the scheme for connectivity has already been approved by the Commission in PPA and the same is commissioned after the date of these Regulations coming into effect, the connectivity as per that approved scheme shall be allowed.

2. The plant shall be responsible for construction of the evacuation system for connecting its plant with the substation of the Distribution Licensee or STU / any Transmission Licensee, as per the scheme approved by the Commission in PPA, on its own or through any other agency engaged for that purpose. The cost of laying the dedicated transmission line to the sub-station, the required bays, associated terminal equipment and synchronization equipment shall be borne by the Generating Plant and such works shall be undertaken under approval and supervision of the Licensee / STU or any Transmission Licensee of the area in which the plant is located:

   Provided that above construction of evacuation system shall be carried out under the approval and supervision of the STU or any Transmission Licensee or Distribution Licensee as the case may be:

   Provided further that the land for extending the bay (s) shall be provided by the owner (the Distribution Licensee or STU / any Transmission Licensee) of the sub-station free of cost:

   Provided further that in case of evacuation through temporary arrangements or in case of additional capacity under supplementary

PPA using existing transmission infrastructure, approved by the Commission on a petition filed by the Generating Company, the applicable fixed cost in the tariff shall be reduced by the proportion of the approved normative capital cost of transmission system. For this purpose normative capital cost of transmission system shall be considered Rs 0.34 Cr/MW for FY 2019-20 to be escalated at 3% for subsequent years. The applicable tariff in such cases shall be decided on case to case basis by the Commission.

Provided further that in case of bagasse based generation and co-generation stations the applicable tariff given in Schedule II (A) shall be reduced by 20 Paise/ kWh in case of evacuation through temporary arrangements or in case of additional capacity commissioned under supplementary PPA using existing transmission infrastructure, approved by the Commission on a petition filed by the Generating Company.

3. In case the Generating Company elects to get the dedicated transmission line constructed by other than STU / Distribution Licensee, the supervision charges shall be payable to Distribution Licensee or STU or any Transmission Licensee as the case may be.

36. Maintenance of Transmission lines and Equipment

1. The Generating Plant shall be responsible for the maintenance of terminal equipment at the generating end and the dedicated transmission lines. However, Distribution Licensees or STU, as the case may be, shall carry maintenance of the dedicated transmission line if so desired by the Generating Company on mutually agreed charges.

2. The Distribution Licensee or the Transmission Licensee or the State Transmission Utility, as the case may be, shall be responsible for maintenance of the terminal equipment(s) at the sub-station of the concerned Licensee. The operation and maintenance cost shall be considered as pass through by the Commission while determining the wheeling and transmission charges of the concerned Licensee or State Transmission Utility, as the case may be.

3. In case of Solar, wind and small hydro based power plants, total cost on maintenance of substation and transmission line including bay etc. shall be borne by Distribution Licensee or STU / any other Transmission Licensee, as the case may be, and the cost incurred shall be allowed in tariff of the STU or any Transmission Licensee or Distribution Licensee as the case may be.

37. Metering Arrangement

The Generating Plant shall provide ABT compatible Special Energy Meters (SEM) at the point of injection and point of drawl and shall comply with all

metering requirements as notified by the State Transmission Utility:

Provided that in case of Solar and wind based Generating Plants the entire cost on metering shall be borne by the Licensee:

Provided that the point of injection and point of drawl for the purpose of recording and billing purposes shall be the substation of the Licensee / STU:

Provided also that metering at generator terminal shall be as per the guidelines issued by the Authority:

Provided further that while calculating the energy billed, the meter reading in MWH taken at substation shall be multiplied by a factor as follows to compensate the transmission losses (the line losses to be taken as percentage per km/MW):

Multiplying Factor = 100 / (100 - 0.001 x L x C.C.)

L = Length of line in km
C.C. = Contracted Capacity in MW
Loss factor = 0.001/km/MW

38. Energy Accounting and Billing

The State Load Despatch Centre shall do energy accounting and billing and the same shall be communicated to the utilities interacting with the grid as per the scheme framed by SLDC in pursuance of the provisions of UPERC Regulations:

Provided that in case of sale to the Distribution Licensee of the area, the PPA may provide for joint metering and in such cases, energy accounting and billing shall be done by the Generating Plant in association with the concerned Distribution Licensee.

39. Banking of Power

1. **Renewable Energy source based Generation and Co-Generation Plants/ Captive RE:**

The Generating Plants may be allowed to bank power subject to the following conditions:

a. All Renewable Energy generating and Co- Generation plants (except for SHP and MSW plants) shall be under ABT mechanism and procedure as mentioned in 21(2) of these Regulations shall apply on them. The Renewable Energy Generating plants shall provide ABT compliant SEMs capable of energy accounting for each block of l5 minutes, or as amended from time.

b. Banking of energy upto 100%, as agreed between the plant

and the Distribution Licensee, shall be allowed.

c. Withdrawal of banked power shall be allowed only as per TOD system i.e. withdrawal of power in the peak/off-peak hours shall not be more than the power banked in that respective time slot.

d. Settlement **of energy sales shall be done quarterly**, based on the power banked as per daily schedules given for banking of power during the quarter**,** at the rate specified for supply of electricity to Distribution Licensee.

e. The Banking as well as withdrawal of banked energy shall be subject to day ahead scheduling**.** The power withdrawn by Renewable Energy Generating plants, as ascertained by SEMs readings, which is not against the banked power, shall be considered as power purchased by the plant.

f. Generating Plant shall be allowed to withdraw power that was banked during a particular quarter in the same quarter. The banked power remaining unutilized on the expiry of the quarter would be treated as sale and the financial settlement shall be made at average power purchase cost (APPC) of the last FY determined by the Commission, or PPA entered with the Distribution Licensee, whichever is less. However, banking charges shall be deducted from such unutilized banked energy.

g. Banking charges shall be 12% of the energy banked except for Solar and Wind Power for which it shall be 6% of the energy banked.

2. **Captive Generating Plants (Non- RE):**

Captive Generating Plants may be allowed banking subject to following conditions:

i. The withdrawal of banked energy, subject to deduction of banking charges of 12% of the banked energy, shall be allowed only as per TOD system i.e. withdrawal of power in the peak/off-peak hours shall not be more than the power banked in that respective time slot.

ii. Banking of energy upto 100%, shall be allowed, subject to technical feasibility regarding evacuation.

iii. The banking as well as withdrawal of power shall be subject to day ahead scheduling.

iv. The plant shall provide ABT compliant special energy meters capable of energy accounting for each block of l5 minutes.

v. The annual settlement of energy shall be in the following manner;

a. The demand posed by the plant in KVA while purchasing power from Distribution Licensee combined with demand due to withdrawal of banked energy by the captive plant shall be considered as the total demand (maximum demand) posed by the captive plant and the same shall not exceed the contracted demand which the plant has agreed to purchase from the Distribution Licensee:

Provided that the demand charges payable by the captive plant to the Distribution Licensee shall be as determined by the Commission, from time to time, in appropriate rate schedule of retail tariff:

Provided also that if the maximum demand exceeds the contracted demand, such excess demand shall be paid at additional rate equal to 150% of the rate applicable for Temporary Supply, as specified by the Commission, from time to time, in the appropriate rate schedule of retail tariff, apart from the normal fixed / demand charges as per the maximum load / demand recorded by the meter.

vi. The withdrawal of banked energy shall be adjusted against the energy purchased from the Distribution Licensee. The balance energy supplied by the Distribution Licensee shall be billed at rate of energy charges specified by the Commission, from time to time, in appropriate rate schedule of retail tariff.

vii. The banked energy in a particular Financial Year (FY) could be utilized in the same FY or the balance can be carried forward to the next FY. The banked energy remaining unutilized on the expiry of such period would be treated as sale to the Distribution Licensee and the financial settlement shall be made at average power purchase cost (APPC) of the last FY determined by the Commission, or PPA entered with the Distribution Licensee, whichever is less. However, banking charges shall be deducted from such unutilized banked energy.

Provided that the licensee may, subject to the availability of power and taking into account technical and commercial feasibility, enter into a banking/emergency energy supply arrangement with a captive generation plant subject to the provisions above and other relevant Regulations of the Commission.

40. Payment Mechanism

For payment of bills made through a letter of credit within a period of one month of presentation of bill for supplied power, a rebate of 2% shall be allowed. If the payments are made by a mode other than through a letter of credit but within a period of one month of presentation of bill, a rebate of 1% shall be allowed. In case the payment of bills for supplied power by the beneficiary (ies) is delayed beyond a period of 2 months from the date of billing, a late payment surcharge at the rate of 1.25% per month shall be levied by the Generating Company:

Provided further that the rate and payment terms approved by UPERC from time to time for the respective consumer category under 'Rate Schedule for Tariff' shall apply for purchase of electricity by the plant.

41. Other Provisions

In case of any inconsistency in these Regulations with the provisions of the Act, as amended from time to time, the provisions of the Act shall have the overriding effect.

42. Repeal

UPERC CRE Regulations, 2014 shall stand repealed with effective date of these Regulations.

By Order of the Commission

(_____)

Secretary

SCHEDULE – I

Tariff for Sale of Power by

A Captive Generating Plant (Coal- based)

i. Existing Captive units commissioned prior to FY 2008-09

For Captive units Commissioned prior to FY 2008-09, the Commission has considered the same normative parameters as applicable for new plants.

Table 1: Existing captive units commissioned prior to FY 2008-09

Financial Year	Fixed Cost (Rs/kWh)	Variable Cost (Rs/kWh)	Total Cost (Rs/kWh)
FY 2019-20	0.67	2.54	3.21
FY 2020-21	0.68	2.67	3.35
FY 2021-22	0.70	2.80	3.50
FY 2022-23	0.72	2.94	3.66
FY 2023-24	0.74	3.09	3.83

ii. Existing Captive units commissioned during FY 2009-10 to FY 2013-14

The fixed & variable costs for the existing plants of unit size upto 100 MW commissioned during FY 2005-06 to FY 2008-09 has been determined based on revised norms as shown below.

Table 2: Fixed Cost - Existing captive units commissioned during FY 2009-10 to FY 2013-14

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2009-10	0.82	0.84	0.86	0.89	0.92
FY 2010-11	1.25	0.84	0.87	0.89	0.92
FY 2011-12	1.27	1.26	0.85	0.87	0.90
FY 2012-13	1.32	1.27	1.26	0.86	0.88
FY 2013-14	1.37	1.32	1.28	1.27	0.86

Table 3: Variable Cost - Existing captive units commissioned during FY 2009-10 to FY 2013-14

Financial Year	Variable Cost (Rs/kWh)
FY 2019-20	2.54
FY 2020-21	2.67
FY 2021-22	2.80
FY 2022-23	2.94
FY 2023-24	3.09

Table 4: Total Tariff - Existing captive units commissioned during FY 2009-10 to FY 2013-14

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2009-10	3.36	3.51	3.66	3.83	4.00
FY 2010-11	3.79	3.51	3.67	3.83	4.01
FY 2011-12	3.81	3.92	3.65	3.81	3.99
FY 2012-13	3.86	3.94	4.06	3.80	3.97
FY 2013-14	3.91	3.99	4.08	4.21	3.95

iii. Existing Captive units commissioned during FY 2014-15 to FY 2018-19

The fixed & variable costs and the total tariff for the existing plant of unit size upto 100 MW commissioned on or after 1st April 2014 and upto 31st March 2019 shall be as shown below:

Table 5: Fixed Cost - Existing captive units commissioned during FY 2014-15 to FY 2018-19

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2014-15	1.49	1.43	1.38	1.34	1.29
FY 2015-16	1.58	1.53	1.48	1.43	1.38
FY 2016-17	1.69	1.63	1.58	1.52	1.47

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2017-18	1.79	1.74	1.68	1.62	1.57
FY 2018-19	1.91	1.85	1.79	1.73	1.67

Table 6: Variable Cost - Existing captive units commissioned during FY 2014-15 to FY 2018-19

Financial Year	Variable Cost (Rs/kWh)
FY 2019-20	2.54
FY 2020-21	2.67
FY 2021-22	2.80
FY 2022-23	2.94
FY 2023-24	3.09

Table 7: Total Tariff - Existing captive units commissioned during FY 2014-15 to FY 2018-19

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2014-15	4.02	4.10	4.18	4.28	4.37
FY 2015-16	4.12	4.20	4.28	4.37	4.46
FY 2016-17	4.23	4.30	4.38	4.46	4.56
FY 2017-18	4.33	4.40	4.48	4.56	4.65
FY 2018-19	4.45	4.51	4.59	4.67	4.76

iv. Captive units commissioned on or after 1st April 2019

The fixed and variable costs and total tariff for the new plants commissioned on or after 1st April 2019 shall be as shown below:

Table 8: Fixed Cost – New captive units commissioned during FY 2019-20 to FY 2023-24

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2019-20	1.71	1.65	1.60	1.55	1.50
FY 2020-21	-	1.76	1.71	1.66	1.61
FY 2021-22	-	-	1.87	1.81	1.76
FY 2022-23	-	-	-	1.94	1.88
FY 2023-24	-	-	-	-	2.00

Table 9: Variable Cost – New captive units commissioned during FY 2019-20 to FY 2023-24

Financial Year	Variable Cost (Rs/kWh)
FY 2019-20	1.93
FY 2020-21	2.02
FY 2021-22	2.13
FY 2022-23	2.23
FY 2023-24	2.34

Table 10: Total Tariff – New captive units commissioned during FY 2019-20 to FY 2023-24

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2019-20	3.63	3.68	3.73	3.78	3.85
FY 2020-21	-	3.79	3.84	3.89	3.95
FY 2021-22	-	-	4.00	4.04	4.10
FY 2022-23	-	-	-	4.17	4.22
FY 2023-24	-	-	-	-	4.35

v. Electricity (MW/MU) supplied over and above 85% PLF

The tariff of the captive generating plants has been determined at 85% PLF. For supply at PLF above 85%, incentive @ 50 paisa per unit shall be paid.

SCHEDULE – II

Tariff for Sale of Power by

Renewable Energy based Generation Plants

A. Bagasse Based Generation & Cogeneration Plants
B. Biomass (Rice Husk Based) Generation Plants
C. Municipal Solid Waste Based Generation Plants
D. Small Hydro Generation Plants
E. Solar Power Generation Plants
F. Wind Based Generation Plants
G. Other RE Source Based Generation Plants

A. Bagasse based Generation & Cogeneration Plants

i. Tariff for Existing Bagasse based projects Commissioned prior to FY 2005-06 and during FY 2005-06 to FY 2008-09

The fixed & variable costs and total tariff for the existing plants (commissioned prior to FY 2005-06 and during FY 2005-06 to FY 2008-09) shall be as shown below:

Table 11: Fixed Cost –Bagasse based Existing Projects commissioned prior to FY 2008-09 (Rs/kWh)

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2005-06 or earlier	1.08	1.10	1.13	1.13	1.15
FY 2006-07	1.10	1.11	1.13	1.15	1.17
FY 2007-08	1.12	1.14	1.16	1.18	1.19
FY 2008-09	1.14	1.14	1.16	1.18	1.21

Table 12: Variable Cost –Bagasse based Existing Projects commissioned prior to FY 2008-09

Financial Year	Variable Cost (Rs/kWh)
FY 2019-20	1.55
FY 2020-21	1.63
FY 2021-22	1.71
FY 2022-23	1.80
FY 2023-24	1.89

Table 13: Total Tariff –Bagasse based Existing Projects commissioned prior to FY 2008-09 (Rs/kWh)

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2005-06 or earlier	2.64	2.74	2.84	2.93	3.04
FY 2006-07	2.66	2.74	2.84	2.95	3.06

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2007-08	2.67	2.77	2.88	2.98	3.08
FY 2008-09	2.69	2.77	2.88	2.98	3.10

Annual Fixed cost for existing plants (commissioned prior to FY 2005-06 and during FY 2005-06 to FY 2008-09) for control period of these Regulations shall be as shown in Table below:

Table 14: Annual Fixed cost of Bagasse based Existing Projects commissioned prior to FY 2008-09 (Rs lakhs)

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2005-06 or earlier	43.43	44.27	45.16	45.33	46.26
FY 2006-07	44.16	44.32	45.17	46.06	46.99
FY 2007-08	44.82	45.67	46.56	47.48	47.65
FY 2008-09	45.55	45.71	46.56	47.45	48.38

ii. Tariff for Bagasse based projects commissioned during FY 2009-10 to FY 2013-14

The fixed & variable cost and total tariff for the existing plants (commissioned during FY 2009-10 to FY 2013-14) for control period of these Regulations shall be as shown below:

Table 15: Fixed Cost –Bagasse based Existing Projects commissioned during FY 2009-10 to FY 2013-14 (Rs/kWh)

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2009-10	1.16	1.17	1.19	1.20	1.22
FY 2010-11	1.78	1.20	1.22	1.24	1.25
FY 2011-12	1.91	1.83	1.24	1.26	1.28
FY 2012-13	2.05	1.97	1.89	1.28	1.30

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2013-14	2.20	2.11	2.03	1.94	1.32

Table 16: Variable Cost –Bagasse based Existing Projects commissioned during FY 2009-10 to FY 2013-14 (Rs/kWh)

Financial Year	Variable Cost
FY 2019-20	1.55
FY 2020-21	1.63
FY 2021-22	1.71
FY 2022-23	1.80
FY 2023-24	1.89

Table 17: Total Tariff –Bagasse based Existing Projects commissioned during FY 2009-10 to FY 2013-14 (Rs/kWh)

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2009-10	2.71	2.80	2.90	3.00	3.11
FY 2010-11	3.33	2.84	2.93	3.04	3.14
FY 2011-12	3.47	3.46	2.96	3.06	3.16
FY 2012-13	3.61	3.60	3.60	3.08	3.19
FY 2013-14	3.76	3.74	3.74	3.74	3.21

Annual Fixed cost for existing plants (commissioned during FY 2009-10 to FY 2013-14) for control period of these Regulations shall be as shown in Table below:

Table 18: Annual Fixed cost of Bagasse based Existing Projects commissioned during FY 2009-10 to FY 2013-14 (Rs lakhs)

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2009-10	46.31	46.90	47.50	48.13	48.78

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2010-11	71.25	48.29	48.92	49.57	50.25
FY 2011-12	76.68	73.41	49.79	50.44	51.11
FY 2012-13	82.32	78.94	75.58	51.29	51.97
FY 2013-14	88.36	84.67	81.21	77.76	52.81

iii. Tariff for Bagasse based projects commissioned during FY 2014-15 to FY 2015-16

The fixed & variable costs and total tariff for the existing plants (commissioned during FY 2014-15 to FY 2015-16) for control period of these Regulations shall be as shown below:

Table 19: Fixed Cost –Bagasse based Existing Projects commissioned during FY 2014-15 to FY 2015-16 (Rs/kWh)

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2014-15	2.32	2.24	2.17	2.10	2.03
FY 2015-16	2.46	2.39	2.31	2.24	2.17

Table 20: Variable Cost –Bagasse based Existing Projects commissioned during FY 2014-15 to FY 2015-16 (Rs/kWh)

Financial Year	Variable Cost
FY 2019-20	1.55
FY 2020-21	1.63
FY 2021-22	1.71
FY 2022-23	1.80
FY 2023-24	1.89

Table 21: Total Tariff –Bagasse based Existing Projects commissioned during FY 2014-15 to FY 2015-16 (Rs/kWh)

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2014-15	3.87	3.88	3.89	3.90	3.92
FY 2015-16	4.02	4.02	4.03	4.04	4.06

Annual Fixed cost for existing plants (commissioned during FY 2014-15 to FY 2015-16) for control period of these Regulations shall be as shown in Table below:

Table 22: Annual Fixed cost of Bagasse based Existing Projects commissioned during FY 2014-15 to FY 2015-16 (Rs lakhs)

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2014-15	92.79	89.92	87.08	84.25	81.44
FY 2015-16	98.67	95.69	92.74	89.81	86.90

iv. Tariff for Bagasse based projects commissioned on or after 1st April 2019

The Commission directs the licensee to procure power from Bagasse based generation and co-generation plants commissioned on or after 1st April 2019, through a process of competitive bidding under Section 63 of the Act.
Provided that the above tariff shall also be applicable to Biogas based plants on technologies approved by the MNRE which do not avail any subsidy. In case of any difficulty the aggrieved parties may approach the Commission for specific relief. The Commission may at its discretion, upon prudence check of the project parameters, may provide an alternate project specific tariff for biogas producers.

v. Electricity (MW/MU) supplied over and above 50% PLF

The Bagasse based generating plants, to generate more power beyond 50% PLF along with the variable cost, as applicable, shall be paid incentive as @ 50 paise per kWh.

B. Biomass (rice husk based) Generation Plants

i. Tariff for Biomass (rice husk based) projects commissioned during FY 2008-09 to FY 2013-14

The fixed & variable costs and total tariff for the existing plants (commissioned during FY 2008-09 to FY 2013-14) for control period of these Regulations shall be as shown below:

Table 23: Fixed Cost –Biomass Existing (rice husk based) Projects commissioned during FY 2008-09 to FY 2013-14 (Rs/kWh)

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2008-09	1.47	1.53	1.59	1.65	1.72
FY 2009-10	1.48	1.54	1.59	1.65	1.72
FY 2010-11	1.89	1.56	1.62	1.68	1.75
FY 2011-12	1.99	1.98	1.64	1.70	1.77
FY 2012-13	2.08	2.07	2.07	1.72	1.79
FY 2013-14	2.19	2.17	2.16	2.16	1.80

Table 24: Variable Cost –Biomass Existing (rice husk based) Projects commissioned during FY 2008-09 to FY 2013-14

Financial Year	Variable Cost (Rs/kWh)
FY 2019-20	3.77
FY 2020-21	3.96
FY 2021-22	4.16
FY 2022-23	4.36
FY 2023-24	4.58

Table 25: Total Tariff –Biomass Existing (rice husk based) Projects commissioned during FY 2008-09 to FY 2013-14 (Rs/kWh)

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2008-09	5.24	5.49	5.74	6.02	6.30
FY 2009-10	5.25	5.50	5.74	6.02	6.30
FY 2010-11	5.66	5.51	5.77	6.04	6.33
FY 2011-12	5.76	5.94	5.80	6.07	6.35
FY 2012-13	5.85	6.03	6.22	6.08	6.37
FY 2013-14	5.95	6.13	6.32	6.52	6.38

Annual Fixed cost for existing plants (commissioned during FY 2008-09 to FY 2013-14) for control period of these Regulations shall be as shown in Table below:

Table 26: Annual Fixed cost of Biomass Existing (rice husk based) Projects commissioned during FY 2008-09 to FY 2013-14 (Rs lakhs)

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2008-09	92.89	96.45	100.20	104.17	108.36
FY 2009-10	93.48	97.07	100.20	104.17	108.36
FY 2010-11	118.97	98.17	101.92	105.89	110.08
FY 2011-12	125.36	124.82	103.49	107.49	111.71
FY 2012-13	131.43	130.77	130.30	108.43	112.65
FY 2013-14	137.82	137.02	136.43	136.05	113.62

ii. Tariff for Biomass (rice husk based) projects commissioned during FY 2014-15 to FY 2018-19

The fixed & variable costs and total tariff for the existing plants (commissioned during FY 2014-15 to FY 2018-19) for control period of these Regulations shall be as shown below:

Table 27: Fixed Cost –Biomass Existing (rice husk based) Projects commissioned during FY 2014-15 to FY 2018-19 (Rs/kWh)

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2014-15	2.39	2.38	2.38	2.37	2.37
FY 2015-16	2.50	2.49	2.48	2.48	2.48
FY 2016-17	2.61	2.60	2.59	2.58	2.58
FY 2017-18	2.73	2.71	2.70	2.69	2.69
FY 2018-19	2.85	2.83	2.82	2.81	2.80

Table 28: Variable Cost –Biomass Existing (rice husk based) Projects commissioned during 2014-15 to FY 2018-19

Financial Year	Variable Cost (Rs/kWh)
FY 2019-20	3.77
FY 2020-21	3.96
FY 2021-22	4.16
FY 2022-23	4.36
FY 2023-24	4.58

Table 29: Total Tariff –Biomass Existing (rice husk based) Projects commissioned during FY 2014-15 to FY 2018-19 (Rs/kWh)

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2014-15	6.16	6.34	6.53	6.74	6.96
FY 2015-16	6.27	6.45	6.64	6.84	7.06
FY 2016-17	6.38	6.55	6.74	6.95	7.16
FY 2017-18	6.49	6.67	6.86	7.06	7.27
FY 2018-19	6.61	6.79	6.97	7.17	7.38

Annual Fixed cost for existing plants (commissioned during FY 2014-15 to FY 2018-19) for control period of these Regulations shall be as shown in Table below:

Table 30: Annual Fixed cost of Biomass Existing (rice husk based) Projects

commissioned during FY 2014-15 to FY 2018-19 (Rs lakhs)

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2014-15	150.68	150.15	149.81	149.69	149.79
FY 2015-16	157.52	156.87	156.41	156.17	156.15
FY 2016-17	164.56	163.78	163.20	162.83	162.68
FY 2017-18	171.88	170.97	170.27	169.78	169.51
FY 2018-19	179.45	178.42	177.59	176.98	176.58

iii. Tariff for Biomass (rice husk based) projects commissioned on or after 1st April 2019

The Commission directs the licensee to procure power from Biomass based projects commissioned on or after 1st April 2019, through a process of competitive bidding under Section 63 of the Act.

Provided that the above tariff is only for rice husk based plants. The developers may approach the Commission on a case to case basis for use of any other alternate fuel;

Provided that the above tariff shall also be applicable to biomass gasifier based plants on technologies approved by the MNRE which do not avail any subsidy. In case of any difficulty the aggrieved parties may approach the Commission for specific relief. The Commission may at its discretion upon prudence check of the project parameters may provide an alternate project specific tariff.

i. Electricity (MW/MU) supplied over and above 80% PLF

To provide suitable incentive to biomass (rice husk based) based generating plants to generate more power i.e. above 80%, the generator shall be paid as below:

a. Variable cost as applicable; plus

b. Incentive @ Rs 50 paise/ kWh

C. Municipal Solid Waste based Generation Plants

i. Tariff for Municipal Solid Waste projects commissioned on or after 1st April 2014

The effective tariff for the Municipal Solid Waste Based Generating Plants shall be as given in Table 31.

Table 31: Total Tariff –Municipal Solid Waste New Projects commissioned during FY 2014-15 to FY 2018-19 (Rs/kWh)

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2014-15	6.49	6.41	6.34	6.28	6.23
FY 2015-16	6.70	6.61	6.53	6.46	6.39
FY 2016-17	6.94	6.84	6.74	6.66	6.58
FY 2017-18	7.20	7.09	6.98	6.88	6.78
FY 2018-19	7.49	7.36	7.24	7.13	7.02

Provided that in case of any difficulty the developers may approach the Commission for a specific relief. The Commission may at its discretion upon prudence check of the project parameters may provide an alternate project specific tariff.

ii. Tariff for New Municipal Solid Waste projects commissioned on or after 1st April 2019

The Commission shall determine project specific tariff for MSW based projects commissioned on or after 1st April 2019 with a ceiling rate of Rs 7/kWh.

iii. Electricity (MW/MU) supplied over and above 70% PLF

To provide suitable incentive to Municipal Solid Waste based generating plants to generate more power i.e. above 70%, the generator shall be paid as below:

a. Variable cost as applicable; plus
b. Incentive @ 50 paise per kWh

D. Small Hydro based Generation Plants

i. Tariff for Old Small Hydro projects commissioned before 1st April, 2014

The effective tariff for the old Small Hydro Power Plants shall be as given in Table 32.

Table 32: Total Tariff –Old Small Hydro Plants (Rs/kWh)

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2005-06 or earlier	1.53	1.57	1.61	1.65	1.70
FY 2006-07	1.58	1.62	1.66	1.71	1.75
FY 2007-08	1.62	1.66	1.71	1.75	1.80
FY 2008-09	1.67	1.71	1.76	1.80	1.85

ii. Tariff for Small Hydro projects commissioned on or after 1st April, 2014

The effective tariff for the New Small Hydro Power Plants shall be as given in Table 33 and Table 34.

Table 33: Total Tariff –Small Hydro Projects upto 5 MW (FY 2014-15 to FY 2018-19) (Rs/kWh)

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2014-15	5.02	4.90	4.79	4.69	4.58
FY 2015-16	5.32	5.20	5.09	4.97	4.87
FY 2016-17	5.57	5.42	5.27	5.12	4.98
FY 2017-18	5.98	5.84	5.72	5.59	5.47
FY 2018-19	6.32	6.19	6.05	5.92	5.80

Table 34: Total Tariff –Small Hydro Projects greater than 5 MW and upto 25 MW (FY 2014-15 to FY 2018-19) (Rs/kWh)

Year of Commissioning	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
FY 2014-15	4.34	4.22	4.11	3.99	3.88
FY 2015-16	4.62	4.50	4.37	4.25	4.14
FY 2016-17	4.91	4.78	4.66	4.53	4.41
FY 2017-18	5.22	5.08	4.95	4.82	4.69
FY 2018-19	5.54	5.40	5.26	5.12	4.99

iii. Electricity (MW/MU) supplied over and above normative PLF

To provide suitable incentive to small hydro based generating plants to generate more power i.e. above normative PLF, the generator shall be paid as below:

a. Incentive as below in Table 35:

Table 35: Incentive to small hydro based generating plants

Capacity	Plant Load Factor	Incentive
For Old Projects		
Any Capacity	PLF above 35%	50 paise/kWh
For Projects commissioned on or after 1st April 2014		
Upto 5 MW	PLF above 30%	50 paise/kWh
5 MW to 25 MW	PLF above 35%	50 paise/kWh

Tariff for projects commissioned after FY 2018-19

The Commission shall determine project specific tariff for projects commissioned on or after 1st April 2019.

E. Solar based Generation Plants

Tariff for projects commissioned before FY 2018-19

The levelized tariff for projects commissioned in FY 2014-15 shall be Rs 7.06/ kWh for 25 years, as provided in UPERC CRE Regulations, 2014.

The Commission vide Order dated 23.08.2017 in the matter for Solar Tariff for FY 2015-16 to FY 2017-18 opined that the tariff for Solar Grid Connected PV Plants from FY 2015-16 onwards shall be project specific.

The tariff for the projects discovered through a process of competitive bidding under Section 63 of the Act, shall be as approved by the Commission.

Tariff for projects commissioned after FY 2018-19

As per the policy of the Government of Uttar Pradesh the tariff for solar PV power plants greater than 5 MW shall be as per that discovered through a process of competitive bidding under Section 63 of the Act.

The tariff for the projects above 5 MW shall be discovered through a process of competitive bidding under Section 63 of the Act.

The tariff for the projects equal to or less than 5 MW shall be the weighted average tariff of Solar projects above 5 MW discovered through Competitive Bidding in last Financial Year and adopted by the Commission.

F. Wind energy based Generation Plants

Tariff for projects commissioned after FY 2018-19

The Commission shall determine project specific tariff for projects commissioned on or after 1st April 2019.

G. Any other RE source based generation

In accordance with Regulation 4 for any renewable energy technologies approved by MNRE, other than Bagasse Based Generation & Cogeneration Plants, Biomass (Rice Husk Based) Generation Plants, Municipal Solid Waste Based, Generation Plants, Biogas Based Generation Plants, Biomass Gasifier Based Generation Plants, Small Hydro Generation Plants and Solar Power Generation Plants, tariff shall be the average power purchase cost (APPC) of the last FY determined by the Commission.

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Annexure -1

Information to be submitted by an existing / proposed Captive (Non- RE) Generating Plant along with the Detailed Project Report (DPR)

1. Whether the Captive Generating Plant is a company or body corporate or association or body of individuals, incorporated or not.
2. State the destination for own use or for use of its members.
3. Site-map indicating location
4. Technical details of Generating Set (s)
5. Single line diagram (details of interconnection at both ends, protection, interlocks etc.)
6. Single line diagram of power evacuation system for sale of power to Licensee
7. Whether complies with the standards specified by the authority.
8. Letter of Consent for Establishment issued by Uttar Pradesh Pollution Control Board
9. Statement of Interruption details.
10. Copy of existing wheeling, banking, sale of surplus power arrangement
11. Copy of agreement of supply/purchase.
12. Details of calculation of cost of generation;
    a. First year
    b. Levelised
13. Any other details considered necessary.
14. Feasibility Report.
15. Details of communication and data transfer facility established
16. Details of person(s) responsible for scheduling and dispatch activities and coordination with SLDC
17. Existing / Proposed connectivity conditions
18. Operation and maintenance of dedicated transmission line (State whether the line was constructed at the expense of the plant or by a Licensee).
19. Details of metering State whether ABT compatible meter is installed or not.

Note:

A half yearly progress report shall be submitted in respect of the proposed Captive Generating Plant in the month of April and October every year till its commissioning.

a) A Completion report shall be filed by with the Commission within 60 days of commissioning of the plant.

Annexure –2

Information to be submitted by an existing / proposed Non-Conventional Energy (NCE) or Captive (RE) source based Co-generation and Generation Plant along with the Detailed Project Report (DPR)

1. Site-map indicating location
2. Technical details of Generating Set(s)
3. Single line diagram (details of interconnection at both ends, protection, interlocks etc.)
4. Single line diagram of power evacuation system for sale of power to Licensee
5. Letter of Consent for Establishment issued by Uttar Pradesh Pollution Control Board
6. Copy of agreement of supply and purchase of electricity with any Licensee or Generating Company.
7. Details of calculation of cost of generation;
    a. First year
    b. Levelised
8. Feasibility Report
9. Details of communication and data transfer facility established
10. Details of person(s) responsible for scheduling and dispatch activities and coordination with/SLDC and RLDC.
11. Existing / Proposed connectivity conditions
12. Operation and maintenance of dedicated transmission line (State whether the line was constructed at the expense of the plant or by a Licensee).
13. Details of metering State whether ABT compatible meter is installed or not.
14. Any other details considered necessary

Note:

a) A half yearly progress report shall be submitted in respect of the proposed Non-Conventional Energy source based Co-generation and Generation Plant Generating Plant in the month of April and October every year till its commissioning.

b) A Completion report shall be filed by with the Commission within 60 days of commissioning of the plant.

Annexure – 3

Yearly report to be filed by Captive (Non- RE) and RE / Generating Plants

Part-A: Captive and Co-generation (Biomass / Bagasse)

1	Name of the Generating Company	
2	Name of the Power Station	
3	Details for the period ending	31st March
4	Capital cost (Rs.Cr.)	
5	Equity (Rs.Cr.)	
6	Outstanding Loan (Rs.Cr.)	
7	Depreciated cost (Rs.Cr.)	
8	Depreciation (%)	
9	O&M (Actual) (Rs.Cr.)	
10	Actual Availability (%)	
11	Plant Load Factor (%)	
12	Gross Energy Generated (MU)	
13	Auxiliary Consumption (%)	
14	Specific heat rate (Kcal/Kwh.)	
15	Specific oil consumption (ml / Kwh.)	
16	Consumption of coal (MT)	
17	Purchase of coal (MT)	
18	Consumption of oil (KL)	
19	Purchase of oil (KL)	
20	Average Stock of coal maintained / month(MT)	
21	Average Stock of oil maintained/ month (KL)	
22	Average Receivables (in months) (Rs.Cr.)	
23	Requirement of spares (% of capital cost)	
24	GCV of coal (Kcal/Kg.)	
25	GCV of oil (Kcal/Lt.)	
26	Average price of coal (per MT)	
27	Transportation cost (Rs. per MT) for Coal	
28	Average price of oil (per KL)	

29	Interest on Loans	
30	Interest on Working Capital	

Unit wise details as on 31st Mar. of the year:

Unit No.	
Rated capacity (MW)	
De-rated capacity (MW)	
Date of synchronization	
Date of commercial operations	
Date of stabilization	
Type of cooling system	
Type of fuel	
Annual Maintenance (Days)	
Forced outage (days)	
Partial outage (days)	
Target Availability	
Actual Availability	
Generation	
Coal consumption per Kwh	
Oil consumption per Kwh	
Cost of R&M (Rs.Cr.)	

Part-B Small Hydro Generating Stations:

1	Name of the Generating Company	
2	Name of the Power Station	
3	Details for the period ending	31st March
4	Capital cost (Rs. Cr.)	
5	Equity (Rs. Cr.)	
6	Loan (Rs. Cr.)	
7	Depreciated cost (Rs. Cr.)	
8	Depreciation (%)	
9	O&M (Actual) (Rs. Cr.)	
10	Actual Availability (%)	
11	Availability Achieved (%)	
12	Designed energy (MU)	
13	Primary Energy (MU)	
14	Energy generated (MU)	
15	Secondary Energy generated (MU)	
16	Auxiliary Consumption (%)	
17	Transformation Losses (%)	
18	Average Receivables (in months)	
19	Requirement of spares (% of capital cost)	
20	Interest on Loans	
21	Interest on Working Capital	

Unit wise details as on 31st Mar. of the year:

Unit No.	
Rated capacity (MW)	
De-rated capacity (MW)	
Date of synchronization	
Date of commercial operation	
Annual Maintenance (Days)	
Forced outage (days)	
Partial outage (days)	

Target Availability	
Actual Availability	
Generation	
Type of station (surface/underground)	
Type of excitation	
Cost of R&M (Rs. Cr.)	

Part-C Solar, Wind, Municipal/Industrial Waste and other NCE Generating Stations:

1	Name of the Generating Company	
2	Name of the Power Station	
3	Details for the period ending	31st March
4	Capital cost (Rs.Cr.)	
5	Equity (Rs.Cr.)	
6	Loan (Rs.Cr.)	
7	Depreciated cost (Rs.Cr.)	
8	Depreciation (%)	
9	O&M (Actual) (Rs.Cr.)	
10	Target Availability (%)	
11	Availability Achieved (%)	
12	Energy generated (MU)	
13	Auxiliary Consumption (%)	
14	Transformation Losses (%)	
15	Average Receivables (in months)	
16	Requirement of spares (% of capital cost)	
17	Transportation cost involved in fuel procurement	
18	Interest on Loans	
19	Interest on Working Capital	

Unit wise details as on 31st Mar. of the year:

Unit No.	
Rated capacity (MW)	
De-rated capacity (MW)	
Date of synchronization	
Date of commercial operation	
Annual Maintenance (Days)	
Forced outage (days)	
Partial outage (days)	
Target Availability	
Actual Availability	

Generation	
Cost of R&M (Rs. Cr.)	

Annexure 4

MODEL POWER PURCHASE AGREEMENT

BETWEEN
(Name of the Generating Plant)
AND
(Name of the DISCOM)

THIS AGREEMENT is made this day of, (hereinafter called the Effective Date), by and between (..Name of the Generating Company ....) registered under the (....Provisions of the Act..) and having its registered office at(..Regd. Office address..), hereinafter called the "Generating Company", which expression shall, unless repugnant to the context or meaning thereof, include its successors and assignees as party of the first part and (..Name of the DISCOM, say M/s. ABC Limited..), a Company registered under (..the Company's Act, 1956..), having its Registered Office at (...enter Regd. Office Address...), hereinafter called "ABCL", which expression shall, unless repugnant to the context or meaning thereof, include its successors and assignees as party of the second part

WHEREAS, the Generating Company is engaged in the business of ……. and other incidental businesses situated at ……. in the State of Uttar Pradesh, more particularly described in Annexure I attached hereto and made a part hereof and,

AND WHEREAS, ABCL is a distribution licensee operating in the State of Uttar Pradesh, and has license to supply power in ……. part of the State.

AND WHEREAS, the Generating Company intends to own, maintain and operate a power plant situated at ……. (hereinafter referred to as the Plant) having a generating capacity of …… MW and generate electricity primarily for his own consumption to the extent of …… MW and is desirous to supply …… MW/MU to ABCL from such plant, and (**Applicable to Captive Plant**)

or

AND WHEREAS, the Generating Plant owns, maintains and operates a power plant situated at ……. (hereinafter referred to as the Plant) having a generating capacity of …… MW and generates electricity primarily for his own consumption to the extent of …… MW and is desirous to supply ..... MW/MU from such plant to ABCL, and **(Applicable to Captive Plant)**

or

WHEREAS, the Generating Company owns and operates / intends to own and operate a (Name of the Applicable Technology as defined by MNRE) plant situated at ……. (hereinafter referred to as the Plant) having a generating capacity of …… MW and generate electricity for his own consumption to the extent of..... MW and ……/MW for supplying electricity so generated by the Generating Plant's facility to ABCL, and

or

WHEREAS the Generating Company has undertaken to implement the power project by installing Plant and Equipment having installed capacity of …… MW situated at ……. (hereinafter referred to as the Plant) its production facility and complete erection, installation and commissioning of the said capacity

and make it operational by (…CoD…), and **(Applicable for new plants only)**
WHEREAS, the Generating Company desires to sell surplus (after its own use) / entire .....(Insert capacity in MW) power generated in the Generating Plant's facility …... MW, and ABCL agrees to purchase electricity generated from such capacity by the Generating Plant for sale, under the terms and conditions set forth herein, and
WHEREAS the Generating Company agrees to purchase …… MW power for it's such plant from ABCL and ABCL agrees to supply …… MW power to such plant at retail tariff as per Regulations specified by the Commission, and
WHEREAS the parties to this Agreement agree for prior consultation with the State Transmission Utility for the purpose of implementation of this agreement and seek its approval for permitting, inter alia, interconnection to the generating plant with the (write name) grid substation owned by STU or other transmission licensee(delete whichever not applicable), and
WHEREAS the parties to the agreement bind themselves for compliance of all relevant provisions specified by the Commission in different regulations regulating the functioning of State Transmission Utility, other Transmission Licensee and State Load Dispatch Centre.
Now, therefore, in consideration of premises and mutual agreements, covenants and conditions set forth herein, it is hereby agreed by and between the parties as follows:

1. DEFINITIONS

Other than those defined below, the words/expressions used in this agreement, unless repugnant to the context, shall have the meaning assigned to them in the Electricity Act, 2003 and amendments thereto, UP Electricity Reforms Act, 1999 and U.P. Electricity Grid Code as amended from time to time, "UPERC (Captive and Renewable Energy Generating Plants) Regulations, 2019" shall mean in short "CRE Regulations, 2019"; as amended from time to time, and the rules framed there under. The words/expressions listed below shall have the meanings respectively assigned hereunder.

1.1. 'Bill Meter' means ABT compatible Import and Export Meter on the basis of which energy bills shall be raised by the Generating Plant/ABCL.

1.2. 'Check Meter' means ABT compatible Import and Export Meter for performing a check on the accuracy of the Bill Meter.

1.3. 'Date of Commissioning' means the date on which supply of Energy is commercially commenced by the Generating Plant to ABCL and includes COD.

1.4. 'Export Meter' means Bill Meter installed at the grid substation (write name) of ABCL/STU for measurement of Active Energy, Maximum demand and Power factor for Energy exported to the Generating Plant from ABCL/STU 's Grid Sub-Station (write name).

1.5. ‘Energy Account Month’ means period from date of meter reading in previous month to date of meter reading in following month and such period should not exceed 35 days.

1.6. ‘Sub Station’ means sub-station (write name) of 11 KV or higher voltage owned, maintained and operated by ABCL or UP Power Transmission Corporation Limited or other transmission licensee (delete whichever not applicable).

1.7. ‘Import Meter’ means Bill Meter installed at the grid substation of ABCL/STU (delete whichever not applicable) for Measurement of Active Energy, Maximum demand and Power factor of Energy Imported to ABCL from the Generating Plant.

1.8. ‘L.C.’ means “revolving and self - replenishing Letter of Credit".

1.9. ‘Bill’ means a bill raised, that includes all charges to be paid by ABCL with respect to sale of Power by the Generating Plant to ABCL.

1.10. ‘STU’ means State Transmission Utility.

1.11. ‘TOD’ means "Time of day”, for the purpose of Metering.

1.12. ‘UPERC’ means the U.P. Electricity Regulatory Commission.

1.13. ‘Wheeling’ means the operation whereby the distribution system and associated facilities of a transmission licensee or distribution licensee, as the case may be, are used by another person for the conveyance of electricity on payment of charges to be determined under Section 62 of the Act

2. POWER PURCHASE, SALE AND BANKING

2.1. ABCL shall accept and purchase …… MUs/ …… MW (delete whichever not applicable) of power made available by the Generating Plant's (*applicable technology*) in accordance with the terms and conditions of this Agreement, at the rate specified for such plant in Schedule I/II (delete whichever not applicable) of “CRE Regulations, 2019”; as amended from time to time. Except for Income Tax, all other taxes, duties and other levies imposed by the Central and/or State Government or other local authorities directly relating to generation shall be payable by ABCL on production of necessary supporting documents by the Generating Plant, while those relating to sale of electricity, shall be borne and payable by ABCL.

(Explanation: The price as per Schedule II of the “CRE Regulations, 2019”; shall apply only in the event of generation of power by using renewable fuel

for generating power. In case conventional fuel is used, the tariff shall be as per Schedule I of the "CRE Regulations, 2019".)

2.2. The rate applicable for supply of electricity by ABCL to the Generating Plant shall be as per the tariff determined by the Commission under appropriate 'Rate Schedule of Tariff' for the consumer category determined on the basis of the total load requirement of the plant and billing done in the manner as specified by the Commission in the Regulations.

2.3. The provisions set out in Annexure- II shall govern the Sale and accounting for power purchased by ABCL.

2.4. The Generating Company shall abide by the provisions of the Act, Rules, Codes, Regulations, Orders and Directions of the appropriate Authority / Commission issued from time to time regarding generation and evacuation of electricity.

2.5. The generating company agrees to bank energy to the extent of % of the energy supplied to ABCL from the plant during the period and ABCL agrees to allow withdrawal of the banked energy during the time specified under these Regulations.

2.6. The provisions of Banking and wheeling of electricity shall be as per the CRE Regulations, 2019.

3. MAINTENANCE REQUIREMENT OF THE GENERATING PLANT

3.1. The Generating Plant's annual maintenance schedule shall normally be from ……. to ……. The Generating Plant shall inform ABCL and the STU regarding the Maintenance schedule in accordance with provisions of the UP Electricity Grid Code as revised by the Commission from time to time.

3.2. Environmental Clearance and compliance of environmental standards shall be the sole responsibility of the generating plant.

4. SUPPLY SCHEDULE

The Generating Plant shall furnish to ABCL and the State Transmission Utility (STU) or State Load Dispatch Centre (SLDC), as the case may be, a day ahead Supply Schedule, schedule of banking and withdrawal of banked energy and other information, as required in the CRE Regulations,14 and UP Electricity Grid Code as amended from time to time or provisions of any other regulation, code, order or direction in that regard or as desired otherwise.

5. BILLING PROCEDURE AND PAYMENTS

5.1. ABCL shall raise monthly bill for electricity purchased by the Generating Plant as per its normal billing cycle after taking into account energy withdrawn from the banked energy and maximum recorded demand in the manner as specified by the Commission in the CRE Regulations, 2019 and such bill shall be payable within the time period stipulated in the General Conditions of Tariff.

5.2. The Generating Plant shall raise monthly bill based on the monthly joint meter reading in the Bill Meter at the grid substation (write name) after deduction of bankable energy as certified by ABCL and in such cases, energy accounting and billing shall be done by the Generating Plant in association with the concerned Distribution Licensee.

The State Load Dispatch Centre shall do energy accounting and billing and the same shall be communicated to the utilities interacting with the grid as per the scheme framed by SLDC in pursuance of the provisions of UPERC Regulations.

5.3. The Monthly Bill raised by the Generating Plant shall be delivered to ABCL at its designated office (write name) on or before the fifth (5th) working day of the following month hereinafter called the Monthly Bill date.

5.4. ABCL shall make full payment against such Monthly Bills to the Generating Plant within thirty (30) working days of the receipt of the Monthly Bill through irrevocable revolving & self-replenishing letter of credit of a value equal to the billable amount opened with a public sector bank in favour of the Generating Plant or through any other mode. The L.C. opening and maintenance charges shall be borne by the Distribution Licensee. The L.C. shall cover the average monthly billing for units indicated in the supply schedule furnished under para 4 above for the particular calendar quarter. The LC shall be updated by 5th working day of the calendar quarter.

5.5. A rebate of 2 percent on the billed amount shall be allowed for payment made through LC within one month of the date of billing and for default in payment beyond two months from the date of billing, a surcharge at the rate of 1.25 percent per month or part thereof shall be levied on the billed amount. Format of the Monthly Bill to be raised by the Generating Plant is given in Annexure III attached hereto and made a part of this agreement.

If the payment is made by a mode other than through LC but within a period of one month of presentation of bill by the generating company, a rebate of 1 percent shall be allowed. However, a surcharge at the rate of 1.25 percent per month of part thereof shall be levied on the billed amount in case of default in payment beyond two months from the date of billing.

5.6. The bills raised by the Generating Plant shall be paid in full subject to the conditions that:

a. There is no apparent arithmetical error in the bill(s).
b. The bill(s) is/are claimed as per tariff referred to in Para 2 of this agreement.
c. They are in accordance with the energy account referred to in Para 14 of this agreement.

5.7. In case of any dispute regarding the bill raised by the Generating Plant, ABCL shall file a written objection with the Generating Plant within fifteen days of receipt of the bill giving full particulars of the disputed item(s), with full details/data and reasons of dispute and amount disputed against each item. The Generating Plant shall resolve the above dispute(s) with ABCL within 30 days.

5.8. In case, the dispute is not resolved within 30 days as provided in para 5.7 above, and in the event it is decided to proceed with the Arbitration as provided in para 23 of this agreement, then ABCL shall pay 100% of the disputed amount forthwith and refer the dispute for arbitration as provided in this agreement. The amount of excess / shortfall with respect to the said disputed amount on final award of arbitration shall be paid / adjusted; but in case of excess, the adjustment shall be made with interest at rate 1.25% per month from the date on which the amount in dispute was refundable by the generating company to ABCL.

6. PARALLEL OPERATIONS

Grid substation (write name) owned by ABCL/STU/other transmission licensee (delete whichever not applicable) shall allow the Generating Plant to interconnect its facility and operate in parallel with ABCL/STU/other transmission licensee's (delete whichever not applicable) system, subject to the provisions of this Agreement, Electricity Act, 2003 and amendment thereto and the UP Electricity Grid Code as amended from time to time.

7. GENERATION FACILITIES OWNED AND OPERATED BY THE GENERATING PLANT

7.1. The Generating Company shall own, install, operate, and maintain the generating plant equipment and associated dedicated transmission line described in Annexure I. The Generating Plant shall follow such operating procedures on its side of the electric interconnection with ABCL/STUs (delete whichever not applicable) system, as are consistent with applicable laws, rules and regulations, the terms and conditions of this Agreement, provisions of the UP Electricity Grid Code, and other related guidelines, if any, issued

by UPERC, SLDC, ABCL, STU and any other concerned Transmission licensee.

7.2. In the event, any other non-conventional / renewable fuel or fuels are used by the Generating Plant to supplement bagasse / biomass the fuel linkage shall be the responsibility of the Generating Plant. No pass through of cost on account of this shall be permitted. (Applicable only to Cogeneration Plants).

Or

7.3. This point is intentionally left blank for inclusion of site specific changes.

7.4. All electrical equipment shall be installed in compliance with the requirements of the Director of Electrical Safety, Government of Uttar Pradesh and safety specifications of the Central Electricity Authority (CEA) under section 53 of the Electricity Act, 2003 and amendment thereto.

7.5. The Generating Plant further agrees to make no material changes or additions to its facility, which may have an adverse effect on ABCL/STU/other transmission licensee (delete whichever not applicable) system, or amend the single-line diagram, relay list and/or trip scheme given in Annexure I, without ABCL's prior written consent. ABCL agrees that such consent shall not be unreasonably withheld or given without the prior permission of STU.

7.6. Without prejudice to the foregoing, the Generating Plant shall install, operate, and maintain its facility in accordance with accepted prudent utility practices in the electricity industry. The Generating Plant's operation and Maintenance schedules and staffing shall be adequate to meet such standards at all times.

7.7. ABCL/STU/other transmission licensee (delete whichever not applicable) shall follow such operating procedures on its side of the electric interconnection point with the Generating Plant, as required to receive Power from the Generating Plant's facility, without avoidable interruptions or adverse consequences on the Generating Plant, and consistent with applicable laws, rules and regulations, and the terms and conditions of this Agreement.

8. INTERCONNECTION FACILITIES

8.1. Power from the Generating Plant shall be transmitted at ……. voltage through a ……KV line from the Generating plant located at The power so transmitted shall be interfaced with ABCL's 11KV/33 KV/132KV or higher grid

sub-station located at (write name of the sub-station) owned by /STU/other transmission licensee (delete whichever not applicable).

8.2. The cost of the dedicated transmission line from the Generating Plant to the designated grid sub-station (write name) of ABCL/ /STU/other transmission licensee (delete whichever not applicable) and the cost of interfacing at both ends (the Generating Plant and grid substation) including work at the ABCL/STU/other transmission licensee (delete whichever not applicable) Sub-Station, cost of bay, tie- line, terminal equipment and associated synchronizing equipment, shall be borne by the Generating Plant. (Not applicable in case of solar, small hydro and wind power generating plants.)

8.3. Left blank for parties to enter the provision of construction of the transmission line in accordance with the provisions of CRE Regulations, 2019 and orders of the Commission as mutually agreed.

(Explanation: The technical and other specifications of the work shall be finalized with ABCL's/STU's approval and be in accordance with standards and specifications laid by ABCL, construction of 132 KV or higher voltage line shall be done under the supervision of STU/other transmission licensee (delete whichever not applicable). The lines constructed for the evacuation of power from the Generating Plant, shall not be used for transmitting/supplying power for any other purpose, without a mutual agreement between the Generating Plant and ABCL /STU/other transmission licensee (delete whichever not applicable), and without prior approval of UPERC. Existing transmission/distribution lines of ABCL/ STU (as the case may be) may be utilized for evacuation of power from the Generating Plant to the Grid sub-station, on the basis of a mutual agreement between the Generating Plant and ABCL and/or STU (as the case may be), with the approval of UPERC. Notwithstanding the above, the work of interfacing at ABCL/STU/other transmission licensee's (delete whichever not applicable) Sub-Station will be done by ABCL/STU/other transmission licensee (delete whichever not applicable) only.)

8.4. The Generating Plant shall be responsible for the Maintenance of equipment at the generating end.

8.5. **Left blank for parties to enter the provision of maintenance of the transmission line in accordance with the provisions of CRE Regulations as mutually agreed**.

8.6. Any work to be done by the Generating Plant shall be taken up only with a specific approval and on the basis of approved drawings and specifications from ABCL and in compliance with the safety requirements as per the UP

Electricity Grid Code. On the completion of work, final approval shall be obtained from ABCL/ STU (as the case may be) before charging the line. The Generating Plant would obtain all statutory clearances/approvals required for this purpose.

8.7. The Generating Plant shall consult ABCL/STU/other transmission licensee (delete whichever not applicable) on the scheme of protection of the interconnecting line/s and the facilities at both ends, and accordingly provide the equipment at both ends. The protection system, installed by the Generating Plant, shall be checked by ABCL/STU/other transmission licensee (delete whichever not applicable).

8.8. Without limiting the foregoing, the Generating Plant and ABCL/STU/other transmission licensee (delete whichever not applicable) shall, operate and maintain the interconnection and parallel operation facility in accordance with accepted good engineering practices in the electricity industry and the UP Electricity Grid Code as amended from time to time and directions of Director Electrical Safety (GOUP) and safety requirements as specified by the Authority under section 53 of the Act.

8.9. The interconnection facilities, to be provided by the Generating Plant are set forth in Annexure IV attached hereto and made a part hereof.

9. PROTECTIVE EQUIPMENT & INTERLOCKING

9.1. The interconnection facilities shall include necessary protective equipment and interlocking devices, which shall be so coordinated that any malfunctioning or abnormality in the generators or in the bus of the Generating Plant shall not adversely reflect on or affect ABCL/STU/other transmission licensee (delete whichever not applicable)'s grid system. In event of any malfunctioning or abnormality, the system shall be designed to ensure that the Generating Plant's breaker trips first to protect the equipment. Prior to adopting it the Generating Plant shall obtain approval of ABCL/STU/other transmission licensee (delete whichever not applicable) for the protection logic of the generator system and the synchronization scheme.

9.2. The Generating Plant shall install necessary equipment to eliminate feeding of reverse power from the Grid to the Generating Plant’s system in absence of any agreement for purchase of power with ABCL.

10. TECHNICAL ASSISTANCE BY ABCL & GENERATING PLANTS RESPONSIBILITY

10.1. On request, ABCL, in consultation with STU, shall provide reasonable technical assistance to the Generating Plant in preparing the design and specifications of the required facilities and for laying down the standard operating and maintenance procedures. The Generating Plant, however, shall be responsible for procurement, installation, testing, maintenance and operation of the electrical system installed in the Generating Plant's premises.

10.2. Notwithstanding the above, ABCL shall not be responsible for any damage caused to the electrical system/generating set of the Generating Plant, on account of errors or defects in the design, procurement, installation, testing, maintenance and operation of the system.

11. ARRANGEMENTS AT THE POINT OF SUPPLY

The Generating Plant shall make all arrangements for paralleling the set/s with ABCL/STU/other transmission licensee (delete whichever not applicable)'s grid in consultation with and to the satisfaction of ABCL and/or STU, subject to the approval of the Director of Electrical Safety, Government of Uttar Pradesh and safety specifications of the Central Electricity Authority (CEA) under Section 53 of the Electricity Act, 2003 and amendment thereto.

12. SYNCHRONISATION

12.1. The Generating Plant shall synchronize its power generating set in consultation with the …… (Designated Authority), in-charge of the …… sub-station of ABCL/STU/other transmission licensee (delete whichever not applicable) and as per provisions of the UP Electricity Grid Code as amended from time to time. The Generating Plant shall give seven (7) days prior intimation of the synchronization program to the Nodal Officer:

a. when commissioning the plant for the first-time,
b. when commissioning after completion of the annual Maintenance program.

12.2. ABCL/STU/other transmission licensee (delete whichever not applicable) shall not be responsible for the damage, if any, caused to the plant and equipment of the Generating Plant due to failure of the synchronizing or the protective system provided by the Generating Plant.

13. LIASON WITH & ASSISTANCE FROM ABCL

The Generating Plant shall closely liaise with the Nodal Officer of ABCL and the STU and shall inform the date of commencement of delivery of power to the designated officials of ABCL and STU one month in advance and also arrange for testing and commissioning of the protection system at least 15

days in advance. If requested by the Generating Plant, ABCL, in consultation with STU as the case may be, shall extend assistance for testing, subject to the condition that the Generating Plant shall pay the charges for such assistance to ABCL, if so indicated by the concerned Testing Division of ABCL. This charge shall be reasonable and be based on the man-hours devoted by ABCL staff and their usual levels of remuneration, and ABCL equipment used. (Applicable to Cogen & other NCE Plants Only)

Or

……(*This point is intentionally left blank for inclusion of site specific provisions.)*

14. METERING

14.1. The Generating Plant shall supply two identical sets of ABT compliant meters, with the facility for downloading data to measure the quantity and time details of the Power exported from and imported by the Generating Plant, conforming to the specifications approved by ABCL/STU, along with all necessary associated equipment. These meters shall be installed and maintained by ABCL/STU/other transmission licensee (delete whichever not applicable). These meters shall be installed at the grid substation of ABCL/ STU/other transmission licensee (as the case may be) at the interconnection point. One set of export/import meters shall be termed as Bill Meter and other set will serve as the Check Meter. The complete metering system consisting of meters, Current Transformers & Potential Transformers shall conform to the 0.2 accuracy class, individually and collectively, and shall comply with the technical standards, accuracy and calibration requirements of the Indian Electricity Rules and the specifications of the Bureau of Indian Standard and the guidelines of CEA for installation of meters.

14.2. The joint meter readings shall be recorded in the format given in Annexure V & VI.

14.3. The Meter/Metering system shall be properly sealed and made pilfer proof, to the satisfaction of both parties.

14.4. ABCL (in consultation with STU if the generating plant is connected to the sub-station of STU/other transmission licensee) shall, test all the metering equipment for accuracy, in the presence of a representative of the Generating Plant, if the Generating Plant so elects, at least once every year while the agreement is in force. Either party may, however, elect to get the meters tested at any time they so desire, at their own cost, in the presence of the other party.

14.5. ABCL/STU's designated representative and the representative of the Generating Plant shall jointly certify the meter test results. After every testing

all metering equipment and the Metering system shall be securely sealed jointly by the representatives of ABCL and the Generating Plant.

14.6. The reading and testing of meters and associated equipment shall be in accordance with accepted good engineering practices in the electricity industry.

14.7. Calibration, inspection and testing of meters and the associated equipment shall be the responsibility of ABCL, who shall bear the related costs.

a. Meter readings shall be taken jointly by parties as indicated below:-

b. ABCL side - …… (Designation of Authorized Official)

14.8. Generating Plant side - Authorized representative of the Generating Plant.

14.9. The reading of the Bill Meter shall form the basis for the energy account, provided that the magnitude (i.e. absolute value) of the difference between the Check and Bill Meter reading is within one percent of the Bill Meter reading.

14.10. If in any month the readings of the Bill Meter and Check Meter are found to be doubtful or beyond the permissible 1% deviation indicated above, both sets of meters shall be checked and calibrated in the presence of authorized representatives of both the parties. Corrections shall be made, if required, on the basis of the error detected during this process, in the Monthly Bill for the period between the previous meter readings and the date and time from which accurate readings become available through replacement or re-calibration. These corrections shall be full and final for the Bill of that month.

14.11. During the period of checking and calibration of both meters simultaneously another export and import meter duly calibrated would be installed by ABCL (in consultation with STU if the plant is connected to the s/s of STU/other transmission licensee). For this purpose, one spare set of meters would be required to be available with the generating plant at all times.

14.12. If the Bill Meter is found to be defective, and the Check meter is found to be accurate then the reading from the latter shall be used for billing purpose and the Bill meters would be re-calibrated and re-installed or replaced by duly tested and calibrated meters, as necessary. Where error in the Check Meter is indicated beyond permissible limit but there is no error in the Bill Meter, monthly energy account would be prepared on the basis of the Bill Meter reading and the Check Meter shall be immediately re-calibrated and reinstalled or replaced as necessary. If both meters are found to be

defective, then the Bill will be revised on the basis of the in-accuracy discovered in the testing. The M.R.I. output from the meters shall be considered an authentic document for verification.

14.13. Metering at generating terminal of each unit of the generating plant shall be ensured as pert the guidelines of the Central Electricity Authority.

15. ACCEPTANCE AND APPROVAL OF ABCL

ABCL's acceptance or approval for equipment, additions or changes to equipment, and their operational setting etc., would be required. Such acceptance/approval shall not be unreasonably withheld and shall be based on ABCL's existing policies and practices after the clearance of STU (only in case the generating plant is connected to the s/s of STU/other transmission licensee) is obtained.

16. COMMISSIONING OF GENERATION FACILITIES

The Generating Plant shall commission the generation facility and synchronize it with ABCL’s / STU system (as the case may be) grid by ……
In case, the plant is commissioned beyond the said dates of commissioning, the tariff applicable for sale of electricity from the plant to ABCL shall be the rate corresponding to the year in which the Commissioning of the plant was agreed to as above in case of delay. However, in the case of delay in Commissioning of the plant for reasons beyond the reasonable control of the generating company, the provisions of para 26 of the Agreement shall apply.

17. CONTINUITY OF SERVICE

17.1. The supply of electricity by the Generating Plant shall be governed by instructions from the state load dispatch center, as per the provisions of the UP Electricity Grid Code as amended from time to time. However, ABCL/ STU/other transmission licensee (as the case may be) may require the Generating Plant to temporarily curtail or interrupt deliveries of power only when necessary in the following circumstances:

a. Repair and/or Replacement and/or Removal of ABCL’s/ STU/other transmission licensee (as the case may be) equipment or any part of its system that is associated with the Generating Plant's facility; and/or
b. Endangerment of Safety: If ABCL/ STU /other transmission licensee (as the case may be) determines that the continued operation of the facility may endanger the safety of ABCL's/ STU/other transmission licensee (as the case may be) personnel or integrity of ABCL's/ STU/other transmission licensee (as the

case may be) electric system, or have an adverse effect on the provision of electricity to ABCL/ STU/other transmission licensee (as the case may be) 's other consumers/customers; and/or

c. Force Majeure Conditions as defined in para 26.

Note: Any necessary inspection, investigation or maintenance of ABCL/ STU/other transmission licensee (as the case may be) 's equipment or any part of its system that is associated with the Generating Plant's facility shall be planned by ABCL/ STU/other transmission licensee (as the case may be) to coincide with the scheduled outage of the Generating Plant's generation system;

17.2. Before disconnecting the Generating Plant from ABCL /STU/other transmission licensee (delete whichever not applicable)'s system, ABCL shall, except in the case of an emergent situation, give advance intimation to the Generating Plant through telephone/wireless or through other means of communication along with reasons for disconnection, and the likely period of the disconnection. However, subsequent to disconnection, ABCL/STU/other transmission licensee (delete whichever not applicable) shall immediately notify the Generating Plant by telephone and confirm in writing the reasons for, and the likely period of, disconnection. During the period so notified ABCL shall not be obligated to accept or pay for any power from the Generating Plant.

17.3. In any such event as described above, ABCL/STU/other transmission licensee (delete whichever not applicable) shall take all reasonable steps to minimize the frequency and duration of such interruptions, curtailments, or reductions.

17.4. ABCL/STU/other transmission licensee (delete whichever not applicable) shall avoid scheduling any event described in 17.1 above, to the extent reasonably practical, during the Generating Plant's operations. Where the scheduling of such an event during the Generating Plant's operations cannot be avoided, ABCL /STU/other transmission licensee (delete whichever not applicable) shall provide the Generating Plant with fifteen days advance notice in writing to enable the Generating Plant to cease delivery of Power to ABCL at the scheduled time.

17.5. In order to allow the Generating Plant's facility to remain on-line and to minimize interruptions to Generating Plant operations, the Generating Plant may provide automatic equipment that will isolate the Generating Plant's facility from ABCL/ STU's (as the case may be) system during major system disturbances.

18. DAILY/MONTHLY/ANNUAL REPORT

The Generating Plant shall submit daily/monthly/annual and other reports on the format, and as per the procedure, specified in the UP Electricity Grid Code as amended from time to time and under the CRE Regulations or as desired by the STU other transmission licensee (delete whichever not applicable) and ABCL.
The Generating Plant shall submit six monthly progress report during the construction of the plant to the distribution licensee. A Completion report shall be filed by with the Commission within 60 days of commissioning of the plant.

19. CLEARANCES, PERMITS AND LICENSES

The Generating Plant shall obtain, at its own expense, all authorizations, permits, and licenses required for the construction, installation and operation of the Generating Plant's facilities and any interconnection facilities, including but not limited to, rights-of-way or easements. ABCL shall provide reasonable assistance, including permissions, approvals and clearances from STU, to the Generating Plant if so requested by the Generating Plant.

20. DURATION

20.1. Unless terminated by default, this agreement shall be valid till the expiry of 20 years from the date of commissioning of the plant.

20.2. The agreement may be renewed or extended for such period as may be mutually agreed between the Generating Company and ABCL on expiry of initial term of 20 years.

21. EVENTS OF DEFAULT AND TERMINATION

21.1. The occurrence of any of the following events at any time during the term of this agreement shall constitute a default by the Generating Plant:

a. Failure on the part of the Generating Plant to use reasonable diligence in operating, maintaining, or repairing the Generating Plant's facility, such that the safety of persons and property, ABCL's equipment, or ABCL's service to others is adversely affected; or
b. Failure or refusal by the Generating Plant to perform its material obligations under this agreement; or
c. Abandonment of its interconnection facilities by the Generating Plant or the discontinuance by the Generating Plant of services covered under this agreement, unless such discontinuance is caused by force majeure, or an event of default by ABCL, or
d. Failure by the Generating Plant to abide by all statutory provisions, rules, regulations, directions and conditions for installation, operation, and supply of power and maintenance of co-generation units etc., enforced

from time to time by the Union/State Government, UPERC or other empowered authorities, including compliance with the UP Electricity Grid Code or as amended from time to time, or

e. Failure by the Generating Plant to pay ABCL any amount payable and due under this agreement within ninety (90) working days of the demand being raised.

21.2. The occurrence of any of the following at any time during the term of this agreement shall constitute a default by ABCL:

a. Failure to pay to the Generating Plant any amount payable and due under this agreement within ninety (90) working days of the receipt of the bill/monthly purchase bill; or
b. Failure to use reasonable diligence in operating, maintaining, or repairing ABCL's interconnecting facilities, such that the safety of persons or property in general, or the Generating Plants equipment or personnel are adversely affected; or
c. Failure or refusal by ABCL to perform its material obligations under this agreement; or
d. Abandonment of its interconnection facilities by ABCL or the discontinuance by ABCL of services covered under this agreement, unless such discontinuance is caused by force majeure or an event of default by the Generating Plant.
e. Except for failure to make any payment due, within ninety (90) working days of receipt of the monthly purchase bill, if an event of default by including non-payment of bills either party extends beyond a period of ninety (90) working days after receipt of written notice of such event of default from the non-defaulting party, then the non-defaulting party may, at its option, terminate this agreement by delivering written notice of such termination to the party in default.
f. Failure by either ABCL or the Generating Plant to exercise any of its rights under this agreement shall not constitute a waiver of such rights. Neither party shall be deemed to have waived the performance of any obligation by the other party under this agreement, unless such a waiver has specifically been made in writing and approved by the UPERC.

21.3. ABCL reserves the right to terminate this agreement upon one month notice to the Generating Plant, if the Generating Plant's facility fails to commence production of electric power within three months from the planned commercial operation date shown in Annexure 1.

22. COMMUNICATION

In order to have effective co-ordination between ABCL and the Generating Plant, a designated official shall be kept on duty round the clock by the Generating Plant and ABCL in their respective premises, with information to each other about the name, location, telephone number etc., of the official. Without prejudice to discharge of their rightful duties by others, this duty official shall take necessary action on receiving information about developments from the other party. The Generating Plant shall provide reliable and effective communication through wireless/hotline etc., between the Generating Plant & the interconnecting sub-station of ABCL/STU/other transmission licensee (delete whichever not applicable) and between the Generating Plant and the SLDC. The Generating Plant shall make provision for an RTU for remote monitoring of voltage, current and other related electrical parameters, as may be required by the STU.

23. DISPUTES AND ARBITRATION

In the event of any dispute or difference between the parties concerning performance of this agreement and/or the rights and liabilities of the parties in respect of which a procedure for the resolution is not otherwise provided for in this agreement the following provisions shall apply:

a. …… (Designation of Authorized Official) on behalf of ABCL, and the authorized representative of the Generating Plant would be empowered to indicate explicitly the nature and material particulars of the dispute/dissatisfaction and the relief sought, and serve notice thereof on the other, with copy to the ABCL's …… (Designation of Senior Official of ABCL) of the Circle under whose jurisdiction the Generating Plants plant is located.

b. On receiving such information, the …… (Designation of Senior Official of ABCL) of the Circle of ABCL in which the Generating Plant is located, shall be required to personally meet the authorized representative of the Generating Plant and the ……(Designation of ABCL's Official) Executive Engineer of the concerned Division, at his own office, separately and/or together, within 15 (Fifteen) days of the date of receipt of such notice, and attempt in good faith to resolve the dispute to the mutual satisfaction of the two parties, within the stipulations dictated by the letter and spirit of the agreement.

c. If the dispute is not resolved by way of a settlement being arrived at and duly signed by each of the above officers within (30) thirty days of the date of receipt of the notice described in clause (a) above, the matter may be referred by either or both the above designated officers of the two parties to the ABCL's …… (Designation of Senior Official of ABCL), who has direct supervisory

jurisdiction over the …… (Designation of Senior Official of ABCL) referred to above, with information to the Chief Executive of the Generating Plant. Within 15 days of receipt of such notice, the (Designation of Senior Official of ABCL) and the Chief Executive of the Generating Plant would be required to meet at the formers office and endeavour to settle the dispute within a further period of (30) thirty days i.e. within a total period of 45 (forty Five) days from the initial date of receipt of the notice by the ……(Designation of Senior Official of ABCL).

d. If the said dispute / dissatisfaction remains unresolved, either party can file a petition before UPERC, whose decision will be final and binding on both the parties. UPERC shall be empowered to determine the exact nature and modalities of the procedure to be adopted in resolving the matter.

24. INDEMNIFICATION

24.1. The Generating Plant shall indemnify, defend, and render harm free, ABCL, its members, directors, officers, employees and agents, and their respective heirs, successors, legal representatives and assignees, from and against any and all liabilities, damages, costs, expenses (including attorney's fees), losses, claims, demands, action, causes of action, suits, and proceedings of every kind, including those for damage to property of any person or entity (including the Generating Plant) and/or for injury to or death of any person (including the Generating Plant's employees and agents), which directly or indirectly result from or arise out of or in connection with negligence or willful misconduct of the Generating Plant.

24.2. ABCL shall indemnify and render the Generating Plant, its directors, officers, employees and agents, and their respective heirs, successors, legal representatives and assignees harmless from and against any and all liabilities, damages, costs, expenses (including outside attorney's fees), losses, claims, demands, actions, causes of action, suits and proceedings of every kind, including those for damage to the property of any person or entity (including ABCL) and/or injury to or death of any person (including ABCL's employees and agents), which directly or indirectly result from or arise out of or in connection with negligence or willful misconduct by ABCL.

25. ASSIGNMENT

This Agreement may not be assigned by either ABCL or the Generating Plant without the consent in writing of the other party, except that either party may assign its rights under this Agreement, or transfer such rights by operation of law, to any corporation with which or into which such party shall

merge or consolidate or to which such party shall transfer all or substantially all of its assets; provided that such assignee or transferee shall expressly assume, in writing, delivered to the other party to this Agreement, all the obligations of the assigning or transferring party under this Agreement.

26. FORCE MAJEURE

26.1. If any party hereto is wholly or partially prevented from performing any of its obligations under this agreement by reason of or due to lightning, earthquake, riots, fire, floods, invasion, insurrection, rebellion, mutiny, tidal wave, civil unrest, epidemics, explosion, the order of any court, judge or civil authority, change in State or National law, war, any act of God or a public enemy, or any other similar or dissimilar cause reasonably beyond its exclusive control and not attributable to its neglect , then in any such event, such party shall be excused from whatever performance is prevented by such event, to the extent so prevented , and such party shall not be liable for any damage, sanction or loss for not performing such obligations.

26.2. The party invoking this clause shall satisfy the other party of the occurrence of such an event and give written notice explaining the circumstances, within seven days to the other party and take all possible steps to revert to normal conditions at the earliest.

26.3. Any payments that become/have become due under this agreement shall not be withheld, on grounds of force majeure conditions developing.

27. AUTHORITY TO EXECUTE

Each respective party represents and warrants as follows:

a. Each party has all necessary rights, powers and authority to execute, deliver and perform this agreement.
b. The execution, delivery and performance of this agreement by each respective party shall not result in a violation of any law or result in a breach of any government authority, or conflict with, or result in a breach of, or cause a default under, any agreement or instrument to which either respective party is a party or by which it is bound.
c. No consent of any person or entity not a party to this agreement, including any governmental authority, is required for such execution, delivery and performance by each respective party. All necessary consents have been either obtained or shall be obtained in the future as and when they become due.

28. LIABILITY AND DEDICATION

28.1. Nothing in this agreement shall create any duty, standard of care, or liability to be discharged by any person not a party to it.

28.2. No undertaking by one party to the other under any provision of this Agreement shall constitute the dedication of that party's system or any portion thereof to the other party or to the public; or affect the status of ABCL as a public utility or constitute the Generating Plant or the Generating Plant's facility as a public utility.

29. NODAL AGENCY OF ABCL

The ……..(Designation of Senior Official of ABCL) shall act as a nodal agency for implementing this Agreement.

30. AMENDMENTS

Any waiver, alteration, amendment or modification of this Agreement or any part hereof shall not be valid unless it is in writing, signed by both the parties and approved by UPERC.

31. BINDING EFFECT

This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors, legal representatives, and permitted assignees.

32. NOTICES

Any written notice provided hereunder shall be delivered personally or sent by registered post, acknowledgement due, or by courier for delivery on written receipt, with pre-paid postage or courier charges, to the other party, at the following address:

THE ……, (Designation of Senior Official of ABCL)
ABCL:
……
……
GENERATING PLANT:
……
……

Notice delivered personally shall be deemed to have been given when it is delivered at the office of the Generating Plants or to the office of the …… (Designation of Senior Official of ABCL) of ABCL, as the case may be, at address set forth above and actually delivered to such person or left with and received by a responsible person in that office. Notice sent by post or courier shall be deemed to have been given on the date of actual delivery as evidenced by the date appearing on the acknowledgement of delivery.

Any party to this agreement may change its address for serving a written notice, by giving written notice of such change to the other party.

33. EFFECT OF SECTION AND ANNEXURE HEADINGS

The headings or titles of the various sections and annexures hereof are for convenient reference and shall not affect the construction or interpretation of any provision of this Agreement.

34. NON-WAIVER

No delay or forbearance by either party in the exercise of any remedy or right will constitute a waiver thereof, and the exercise or partial exercise of a remedy or right shall not preclude further exercise of the same or any other remedy or rights.

35. RELATIONSHIP OF THE PARTIES

Nothing in this Agreement shall be deemed to constitute either party hereto as partner, agent or representative of the other party or create any fiduciary relationship between the parties.

36. ENTIRE AGREEMENT

This agreement constitutes the entire understanding and agreement between the parties.

37. GOVERNING LAW

This agreement shall be governed by and construed in accordance with the laws applicable in the State of Uttar Pradesh

38. NO PARTY DEEMED DRAFTER

The parties agree that no party shall be deemed to be the drafter of this Agreement and that in the event this Agreement is ever construed by arbitrators, or by a court of law, no inference shall be drawn against either party on account of this Agreement or any provision hereof being drafted by them. ABCL and the Generating Plant acknowledge that both parties have contributed substantially and materially to the preparation of this Agreement.

39. APPROVALS

Wherever approvals from either ABCL or the Generating Plant are required in this Agreement, it is understood that such approvals shall not be unreasonably withheld.

40. ANNEXURES

ANNEXURES I to IX WOULD FORM PART OF THIS AGREEMENT.

41. STANDARD FOR DECISION MAKING

41.1. All operational decisions or approvals that are to be made at the discretion of either ABCL or the Generating Plant, pursuant to the terms of this agreement, including specifications and design criteria etc., shall be made or performed according to good engineering practices prevailing in the electricity industry.

41.2. Professional decisions or activities undertaken by either party for the purpose of constructing, installing, removing, maintaining or operating any facility, which may affect the operations of the other party's facility or facilities, shall be made or performed according to good engineering practices prevailing in the electricity industry.

IN WITNESS:
WHEREOF, ABCL and the Generating Plant have executed this agreement as of the ……. Day of ……. in the year …….

FOR THE GENERATING PLANT:
NAME:
DESIGNATION:
ADDRESS:

FOR ABCL:
NAME:
DESIGNATION:
ADDRESS:

WITNESSED BY:
NAME:
DESIGNATION:
ADDRESS:

WITNESSED BY:
NAME:
DESIGNATION:
ADDRESS:

ANNEXURE I

THE GENERATING COMPANY'S GENERATION FACILITIES

1. THE GENERATING PLANT:

NAME:	
LOCATION:	
CHIEF EXECUTIVE:	
CONTACT PERSON:	
MAILING ADDRESS:	
TELEPHONE NUMBER:	
FAX NUMBER:	
EMERGENCY TELEPHONE NUMBER:	

2. GENERATING EQUIPMENT:

BOILERS:	
TURBO-GENERATOR SETS:	
GENERATION VOLTAGE:	
SPEED:	
TYPE OF GOVERNOR:	
TRANSFORMER:	

FIRST SYNCHRONISATION WITH _____KV LINE (INITIAL OPERATION DATE):

Transmission Line: KV line connecting with KV Sub-station of ABCL//STU/other transmission licensee (delete whichever not applicable) .

COMMERCIAL OPERATION DATE:

3. Stipulations relating to the facilities:

3.1. For the purpose of this agreement the Generating Plant's facility includes all real estate, fixtures, and property owned, controlled, operated or managed by the Generating Plant in connection with or to facilitate generation, transmission, delivery, or furnishing of electricity or required to interconnect and deliver the electricity to ABCL's system.

(Explanation: A single-line diagram relay list and trip scheme of the Generating Plant's facility, reviewed and accepted by ABCL at the time the Agreement is signed, shall be attached to this agreement and made part hereof. The single-line diagram, relay list, and trip scheme shall expressly identify the point of electrical interconnection of the Generating Plant's facility to ABCL/STU/other transmission licensee (delete whichever not applicable)'s system. Material changes or additions to the Generating Plant's generating and interconnection facilities reflected in the single-line diagram, relay list, and trip scheme shall be approved by ABCL.)

3.2. The Generating Plant shall furnish, install, operate and maintain facilities such as breakers, relays, switches, synchronizing equipment, monitoring equipment, and control and protective devices as suitable for parallel operation with ABCL/STU/other transmission licensee (delete whichever not applicable)'s system and acceptable to ABCL. Such facilities shall be accessible to authorized ABCL personnel for inspection, with prior intimation to the Generating Plant

3.3. The Generating Plant shall furnish, in accordance with ABCL/STU/other transmission licensee (delete whichever not applicable)'s requirements, all conductors, service switches, fuses, meter sockets, meter and instrument transformer housings and mountings, switches, meter buses, meter panels, and similar devices required for the service connection and meter installation at ABCL/STU/other transmission licensee (delete whichever not applicable)'s premises. This equipment shall be installed and Commissioned by ABCL/STU/other transmission licensee (delete whichever not applicable)

3.4. ABCL shall review and approve the design drawings and Bill of Material for the Generating Plant's electrical equipment, required to interconnect with ABCL/STU/other transmission licensee (delete whichever not applicable)'s system. The type of electrical equipment, the type of protective relaying equipment and the settings affecting the reliability and safety of operation of ABCL/STU/other transmission licensee (delete whichever not applicable)'s and the Generating Plant's interconnected system shall be approved by ABCL. ABCL, at its option, may request witnessing operation of the control, synchronizing, and protection schemes.

3.5. The Generating Plant shall provide a manual isolating device, which provides a visible break to separate the Generating Plant's facilities from ABCL/STU/other transmission licensee (delete whichever not applicable)'s

system. Such a disconnecting device shall be lockable in the OPEN position and be readily accessible to ABCL/STU/other transmission licensee (delete whichever not applicable) personnel at all times.

4. **Operating Procedures**:

4.1. The Generating Plant shall operate its plant when interconnected with the grid as per the procedure given in the UP Electricity Grid Code as amended from
time to time. The overall responsibility of operation and implementation of the UP Electricity Grid Code rests with the State Load Dispatch Centre and the State Transmission Utility under the provisions of the Act, 2003.

4.2. The Generating Plant's normal annual Maintenance shall be carried out from ……. to …….

4.3. The Generating Plant shall notify ABCL/STU/other transmission licensee (delete whichever not applicable)'s interconnecting substation and SLDC prior to synchronizing a generator on to or taking a generator off of the system. Such notification should be as far in advance as reasonably possible under the circumstances causing the action.

5. <u>Single Line Diagram</u>

<u>(To Be Inserted Here)</u>

Annexure II

Sale and Accounting for Power

1. In case the Generating Plant is not a consumer of ABCL, protective gear at ABCL/ STU (as the case may be)'s Substation would be designed to ensure that reverse flow of power from ABCL's system to the Generating Plant is totally blocked out and the circuit breaker at the Substation gets opened automatically when required. However, notwithstanding this provision, if any export to the Generating Plant takes place, it would be paid for by the Generating Plant in accordance with the terms of this agreement.
2. On the first day of the Energy Account Month, the Generating Plant shall provide information in writing or Generation Schedule to SLDC and M/s ABCL , when ABT is implemented in the state about the quantity of Power to be wheeled by way of purchase or sale or banking, as the case may be, during the month.
3. ABCL will purchase Electricity based on the principle of merit order dispatch and in accordance with provisions of the Supply License, CRE Regulations & Directions of UPERC and other statutory authorities, and requirements of the State Load Dispatch Centre. (Applicable to Captive Generating Plants Only)

   or

   The purchase of electricity by ABCL shall be subject to the provisions of the Distribution License, CRE Regulations & Directions of UPERC and other statutory authorities, and requirements of the State Load Dispatch Centre. (Applicable to Cogeneration & NCE Plants)
4. Power accounting and Billing would be done on the basis of the section titled "Metering" in the main agreement (Clause No. 14.0)

ANNEXURE III

SAMPLE MONTHLY BILL

INVOICE

Date :	
For the Month of:	
Monthly Purchase Bill No.	
Name of Buyer: ABCL	Name of the Generating Plant:
Address:	Address:
Town:	Town:
District:	District:
PIN Code:	PIN Code:
Tel. No.:	Tel. No.:
Fax:	Fax:

DESCRIPTION	QUANTITY	UNIT PRICE	AMOUNT
ENERGY SUPPLIED (KWh)			
ENERGY FOR WHEELING (KWh)			
ENERGY FOR PAYMENT (KWh) (1-2)			

Banked Energy

Energy banked during the month	
Energy balance as on preceding month	
Energy scheduled for withdrawal during the month	
Banking charges	
Energy withdrawn during the month (3-4)	
Energy banked at the end of the month (1+2-3)	

OTHER CHARGES

Less/Add:	
SUBTOTAL:	
TOTAL DUE :	

Verified by:

For Generating Plant Ltd.
Authorized Signatory

For ABCL
Authorized Signatory

ANNEXURE IV

INTERCONNECTION FACILITIES PROVIDED BY THE GENERATING PLANT

	ITEMS PROVIDED	NOT PROVIDED
LINE BAY/S		
STRUCTURES		
BUS BARS, CLAMPS AND CONNECTORS		
GROUNDING GRID		
ISOLATORS		
CURRENT TRANSFORMERS		
CIRCUIT BREAKERS		
CONTROL CUBICLES		
CONTROL CABLING		
AC / DC POWER SUPPLY		
COMMUNICATION EQUIPMENT		
SYNCHRONISATION & PROTECTION FACILITIES		
AUTOMATIC VOLTAGE REGULATOR		
AUTO SYNCHRONISATION UNIT		
CHECK SYNCHRONISATION RELAY		
PROTECTION FOR INTERNAL FAULTS:		
DIFFERENTIAL GENERATOR		
DIFFERENTIAL UNIT TRANSFORMER		
RESTRICTED EARTH FAULT		
STATOR EARTH FAULT		
ROTOR EARTH FAULT		
INTER-TURN FAULT		
OVER VOLTAGE		
LOSS OF EXCITATION		
UNDER VOLTAGE		
REVERSE POWER		
LOW FORWARD POWER RELAY		

PROTECTION AGAINST GRID FAULTS:		
MINIMUM IMPEDANCE(DISTANCE PROTECTION RELAY)		
UNBALANCE (NEGATIVE PHASE SEQUENCE)		
O/C & E/F (UNIT TRANSFORMER)-LT & HT		
ITEMS	**ITEMS PROVIDED**	**NOT PROVIDED**
OVERLOAD ALARM		
OVERFLUXING RELAY		
PROTECTION AGAINST GRID DISTURBANCES:		
UNDER FREQUENCY		
OVER FREQUENCY		
POLE SLIP		

ANNEXURE V

BILL METER READINGS OF GENERATING PLANT

READING SHOULD BE TAKEN ON 1ST WORKING DAY OF EVERY MONTH, AT 12.00 NOON.

NAME OF THE GENERATING PLANT:	
PLACE:	
TALUKA:	
DISTRICT:	
STATE:	
C.T. RATIO AVAILABLE/CONNECTED:	
P.T. RATIO AVAILABLE/CONNECTED:	
SCALE FACTOR (IF ANY)	
MULTIPLYING FACTOR (MF):	
BILLING METER MAKE / NUMBER:	

METER READINGS:

KWH	EXPORT METER READING	IMPORT METER READING
PREVIOUS READING		
CURRENT READING		
DIFFERENCE		
DIFFERENCE X MULTIPLYING FACTOR		

Authorised Signatory	Authorised Signatory	Authorised Signatory
EXECUTIVE ENGINEER	**EXECUTIVE ENGINEER**	**AUTH. REPRESENTATIVE**
TRANSMISSION	**ABCL**	**GENERATING PLANT**

DATE:

NOTES:

1. ABCL / STU/ other transmission licensee (delete whichever not applicable) shall maintain a daily logbook to record hourly readings of the Bill Meter/ HT Meter.

2. The Generating Plant shall maintain a daily log to record the hourly generation and supply in KWh, along with the schedule given by ABCL's Despatcher.
3. If the meter is changed, the reason/s, date, time of meter change and new meter make and number must be recorded by both parties.

ANNEXURE VI

CHECK METER READINGS OF GENERATING PLANT

READING SHOULD BE TAKEN ON 1ST WORKING DAY OF EVERY MONTH, AT 12.00 NOON.

NAME OF THE GENERATING PLANT:	
PLACE:	
TALUKA:	
DISTRICT:	
STATE:	
C.T. RATIO AVAILABLE/CONNECTED:	
P.T. RATIO AVAILABLE/CONNECTED:	
SCALE FACTOR (IF ANY)	
MULTIPLYING FACTOR (MF):	
BILLING METER MAKE / NUMBER:	

METER READINGS:

KWH	EXPORT METER READING	IMPORT METER READING
PREVIOUS READING		
CURRENT READING		
DIFFERENCE		
DIFFERENCE X MULTIPLYING FACTOR		

Authorised Signatory	Authorised Signatory	Authorised Signatory
EXECUTIVE ENGINEER	**EXECUTIVE ENGINEER**	**AUTH. REPRESENTATIVE**
TRANSMISSION	**ABCL**	**GENERATING PLANT**

DATE:

1. ABCL /STU/other transmission licensee (delete whichever not applicable) shall maintain a daily logbook to record hourly readings of the Check Meter/ HT Meter.
2. The Generating Plant shall maintain a daily log to record the hourly generation and supply in KWh, along with the schedule given by ABCL's Despatcher.
3. If the meter is changed, the reason/s, date, time of meter change and new meter make and number must be recorded by both parties.

ANNEXURE VII

DAILY GENERATION REPORT

Active Power (KWh)

Time	Scheduled	Meter Reading	Difference x M.F.
00			
01			
02			
03			
04			
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
	Total (for each column)		

Summary of Active Power, KWh

Time		Scheduled	Meter Reading	Difference x M.F.
Daily				

0600	– 2200			
2200	- 0600			
Cumulative for Month				
0600	– 2200			
2200	- 0600			

To:

1. Concerned SLDC, ABCL
2. Executive Engineer, Transmission, ABCL
3. Authorized Representative of the Generating Plant

Annexure VIII

MONTHLY TRIPPING REPORT

Name and Address of the Generating Plant:	
Installed generation Capacity (MW):	
Date of First Commissioning (Synchronizing):	
Date of Commercial Operation:	
Date of Synchronizing:	
Progressive Days (generation): In Days	

	Tripping			REASON FOR TRIPPING				SYNCHRONISIATION			TOTAL TIME LOST		REMARKS
S.N	Date	Time		Relay operated	Mech.	Electrical	Other	Date	Time		Hr	Min	
		Hr	Min						Hr	Min			

To:

1. Concerned SLDC, ABCL
2. Authorized Person/ Executive Engineer, STU /other Transmission Licensee/ABCL (as the case may be)
3. Authorized Representative of the Generating Plant

ANNEXURE IX

PLANNED & FORCED OUTAGE

	OUTAGE			REASON FOR OUTAGE				SYNCHRONISIATION			TOTAL TIME LOST		REMARKS
S.N	Date	Time		No Fuel	Mech.	Electrical	Other	Date	Time		Hr	Min	
		Hr	Min						Hr	Min			

Progressive Days:

Time Lost (In Hours):

- During Month& Year
- Since First Commissioning

To:

1. Concerned SLDC, ABCL
2. Authorized Person/ Executive Engineer, STU /other Transmission Licensee/ABCL (as the case may be)
3. Authorized Representative of the Generating Plant

Uttar Pradesh Electricity Regulatory Commission,
Lucknow

In the matter of Uttar Pradesh Electricity Regulatory Commission (Captive and Renewable Energy Generating Plants) Regulations, 2019 (hereinafter referred to as CRE Regulations, 2019)

Date: 04.04.2019

STATEMENT OF REASONS

Background:

The Electricity Act, 2003 and the Regulations framed thereunder envisage promotion of Renewable and alternative sources of sources of energy generation and consumption. Further, Section 86(1) (e) of the Act specifically provides for promotion of cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of distribution licensee. The Government of India has also pronounced the National Electricity Policy, Tariff Policy etc. which also envisage generation and consumption of energy from the Renewable Energy Sources including the Solar energy in the country.

The Commission, to promote the use of Green Energy by the consumers, in exercise of powers conferred under Section 61, 66, 86(1)e and 181 of the EA, 2003 and all other power enabling in this behalf, notified UPERC (Captive and Renewable Energy Generating Plants) Regulations, 2014 vide Notification No. **UPERC/Secretary/CRERegulations/2014/1807** in this regard dated 20.01.2015. The Regulations are applicable from 01.04.2014 to 31.03.2019 and applies to captive generation and renewable sources for generation and co-generation and specifies Terms and Conditions for Supply of Power and Fixation of Tariff for sale of power from Captive Generating Plants, Co-generation Plants, Renewable Sources of Energy and Other Non-Conventional Sources of Energy based Plants to a Distribution Licensee.

Over the past few years, the sector has undergone drastic change and has seen several disruptions. In the wake of such transitions, the Commission began the process for review of UPERC CRE Regulations, 2014 in September, 2018. The Concept Paper along with public notice was hosted on the Commission's website www.uperc.org and Public Notice in this regard was issued vide Notification No. UPERC/Secy/JD(G)/2018/1157 dated 11.10.2018 for inviting comments and suggestions from the stakeholders upto 12.11.2018.

Through the Concept Paper, the Commission granted an opportunity to stakeholders to generate a debate on various aspects of the tariff framework. In response, written comments/suggestions/objections were received from the following stakeholders:

1. Uttar Pradesh Power Corporation Limited (UPPCL)
2. Essel Infraprojects Ltd.
3. UP Sugar Mills Cogeneration Association
4. Rama Shanker Awasthi
5. Amplus Energy Solutions Pvt. Ltd.
6. Renew Power Ltd.
7. ITC Limited
8. Hindalco Industries Ltd.
9. Grasim Industries Ltd.
10. Open Access Users Association
11. Indian Energy Regulatory Services
12. Vineet Sarawagi

Considering all the received comments and suggestions thereon, the Commission revisited the provisions of CRE Regulations, 2014 and proposes a draft Regulations for the same, which shall repeal the existing one once finalised.
Statement of Reasons that captures the comments received from Stakeholders along with analysis and decision of the Commission on the same are as follows:

VIEWS OF THE STAKEHOLDERS AND ANALYSIS AND DECISION OF THE COMMISSION ON IMPORTANT ISSUES

I. Control Period:

Commission's Proposal: The control period should be taken same as earlier Regulations i.e. five (5) years or it should be taken as three (3) years like CERC and other states

Comments:

1. **UPPCL**: During the past one decade, the maturity level of RE technologies has grown significantly. Majority of the capacity addition has come through solar/wind technologies through the competitive bidding route and utilisation of the competitive bidding route for other RE technologies is under progress.

   Additionally, the reducing prices of equipment and discovery of lower tariff regimes through competitive bidding calls for consideration of the merits of short duration of Control Period of 3 years against a long duration of 5 years.

All India level Solar tariffs at the commencement of the present tariff period (2014-19) were around Rs. 8.00-9.50 per kWh. Similarly, the regulated wind power tariffs were around Rs. 6.29 per kWh for the low wind zones. However, the scenario changed drastically with commencement of reverse auction based bidding in Solar/Wind power procurement. Solar tariffs have witnessed a low of Rs. 2.44 per kWh in 2018-19 while after the wind based auction was commenced in 2017, the wind tariffs have seen a low of Rs. 2.43 per kWh in 2017-18.

In view of the above, the control period should be taken as three (3) years because the current market scenario where technologies evolve very fast, with improving equipment efficiency and decreasing prices, 5 years is too long as control period. In order to avoid a situation where the validity of underlying tariff parameters is questioned vis-à-vis the dynamics of the market and the maturity level of renewable energy technologies**, it is desirable that the control period be fixed for 3 years.**

2. **Rama Shanker Awasthi:** Most of the States which are having a good population of Sugar Plants e.g. Maharashtra, Tamilnadu, Karnataka etc. are having a control period of 5 years. **It is proposed to continue control period of 5 years.**

3. **Open Access Users Association:** It is requested to take "control period" as 3 years like CERC and other States.

4. **Essel Infraprojects Ltd.**:
   i. It is proposed to continue with the existing Regulations for the Control Period of 5 years. Further, in order to have certainty of minimum returns during the entire concession period, it is requested to direct the Authority and DISCOMs to consider the tariff as fixed in the year of bidding.
   ii. In line with the CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2017, MERC (Terms and Conditions for Determination of Renewable Energy Tariff) Regulations, 2015, MPERC Tariff Order dated June 29, 2017 and TNERC Comprehensive Tariff Order dated March 28, 2017, it is requested that the tariff fixed by the Uttar Pradesh Electricity Regulatory Commission should apply to all projects which come up during the control period and the tariff determined should remain valid for the entire Useful Life/Concession Period. This is necessary for the interest of the power project developer and ease of funding by lenders.

5. **UP Sugar Mills Cogeneration Association:** The Control Period may be considered at 5 years as this would give certainty to tariff for the project developers as well as avoid the long consultative process involved in framing the Regulations. However,

there may be a provision that early review may kindly be taken up if a substantial change in the parameters are observed.

6. **Vineet Sarawagi:**

The Tariff approved by the Commission should be applicable for the entire useful life (i.e. 20 years from the Commercial Operation Date) of the MSW based Power Generating Station. In certain cases, wherein the MSW based Power Generating Station is not able to get the minimum daily waste as analysed in initial survey, the Commission should allow the Project Developer to file the Tariff Petition as and when the Generating Station is operational on the minimum required daily waste.

Analysis and Decision of Commission:

Taking into consideration the views and suggestion of stakeholders and to maintain regulatory certainty/ continuity, the Commission finds it appropriate to have 5 years' Control Period same as earlier Regulations. The control period of CRE Regulations, 2019 shall be from 01.04.2019 to 31.03.2024.

Essel Infraprojects Ltd. has suggested that tariff determined under these Regulations should apply to all projects which come up during the control period and should remain valid for the entire Useful Life/Concession Period. However, considering that the RE technologies are evolving very fast, with improvement in equipment efficiency and decrease in prices, the Commission to continue with the existing framework of tariff determination wherein, the tariff is determined for control period only and not for complete useful life of the project.

II. Tariff- Competitive Vs Preferential:

Commission's Proposal:

i. Whether in future all procurement of RE power particularly for solar, bagasse and bio-mass based generation and co-generation should be through bidding route only?
ii. For compulsory procurement of 100% power from waste-to-energy plants, whether Project specific tariff or feed-in tariff should be determined by the Commission?
iii. For Solar power projects under RSPV Regulations based on Gross metering, whether any change in tariff is required.
iv. As power from SHPs is bought through bidding route, thus should only project specific tariff be decided for new SHPs.

Comments:

1. **UPPCL**:

A) Mode of Procurement of RE power:

i. Generic tariffs should be determined for the plants which are about to complete their useful life.

ii. For new projects, UPPCL may be allowed to enter into PPA based on competitive bidding. Notably, the recently concluded bids for procurement of biomass based power resulted in significantly low tariffs. In the bid process conducted by UPPCL in around April 2018, a total offer of 16 MW was received against an invited quantum of 10 MW at an L1 levelised rate of Rs. 6.457 per kWh. Against it, the Levelised power purchase rate from biomass sources as per CRE regulations is around Rs. 9.55 per kWh when considered over the useful life of Plants.

iii. Since the construction costs of solar and wind energy power plants have been in dynamic nature and still expected to fall further, it is suggested to go for bidding route for solar and wind power plants of capacity more than 5 MW.

B) Project specific tariff or feed-in tariff for procurement power from waste to-energy plants?

In the current scenario, the waste-to-energy projects in the state are in nascent stage due to fuel scarcity, technology limitations and inadequate private sector participation.

i. UPERC may thus provide for generic tariff determination for such projects. Also considering the limited potential of such capacity, there will be hardly any competition in the bid route if so, adopted for waste to energy-based plants.

ii. The primary objective of the Waste-to-energy plants is scientific processing of the waste and not the generation of electricity. However, a higher unrealistic tariff can be claimed by some to make the project viable through sale of energy. Financial Viability of these projects are to be ensured primarily through the 'Tipping Fee' and one should see electricity only as a 'by-product'. The Commission may consider a generic tariff instead of project specific tariff. This would help UPPCL to understand the electricity tariffs well in advance for the 'waste to energy' electricity and plan the power procurement strategies accordingly.

C) For Solar power projects under RSPV Regulations based on Gross metering, whether any change in tariff is required.

i. In present practice, the tariff related to Gross metering is considered at the previous year's APPC. The Commission may consider revising this clause and introduce a slab based pricing similar to 'Karnataka Rooftop solar policy' as the current APPC (of year 2017-18 which is applicable to 2018-19 gross

metering export) is more than the present price trend of solar energy price in the country.

ii. Further, the Commission has considered payment at APCC but the old provision of Rs.2.00/kWh for unadjusted /net exported electricity by the consumer should be retained. This may be revised considering the present price trend of solar electricity and the objective of 'Net-metering' which is to generate electricity for their consumption and not for the commercial sale of electricity.

D) For SHP, the bidding route should be continued.

The hydro power potential in Uttar Pradesh is available with irrigation canals, rivers, dam toes etc. UPJVNL is the nodal agency to undertake identification, surveying and preparation of feasibility and detailed project reports. As per Uttar Pradesh Jal Vidyut Nigam Limited (UPJVNL), the total potential of small hydro in Uttar Pradesh is 568 MW out of which 25.1 MW has been installed until Dec'17.
The generic tariff determined by the Commission for small hydro projects is in the range of Rs 5.68-Rs 6.47/kWh which is much higher in comparison to other RE technologies. Therefore, in order to reduce the overall power purchase cost, it is suggested that power procurement for new SHPs should also be through bidding route provided that in cases where project cost goes much higher due to some unavoidable reasons, the developers may approach the Commission for a project specific tariff.

2. **Rama Shanker Awasthi:** Bagasse and Biomass Plant technology and operations are matured enough and there is no need to promote further. Other RE sources are being purchased on competitive Bidding route. Considering all RE power at the same platform, we propose to go for competitive Bidding route only. Competitive Bidding may be implemented with top ceiling rate per unit.

3. **Essel infraprojects Ltd.**:

The existing UPERC (Captive and Renewable Energy Generating Plants) Regulations, 2014, determines the tariff for the Refuse Derived Fuel (RDF) based MSW power stations, however, the existing norms are not applicable for mass incineration based MSW power stations. **Therefore, the Commission is requested to also fix the Feed-in-Tariff for the Municipal Solid Waste (mass incineration) based power stations also.**
For compulsory procurement of 100% power from Waste-to-Energy Plants, Feed-in-Tariff should be determined by the Commission. As the WTE technology is at a nascent stage, it is preferred that a Feed-in-Tariff support should be provided by the Commission to ensure that adequate regulatory support is available to MSW

based Power projects till such time that enough confidence is generated amongst all its stakeholders. However, depending upon the peculiarity of the WTE Power Generating Project, such Feed-in-Tariff should be considered as the minimum norm for working out the tariff on case specific basis.

MNRE vide F.No.10 /1/2013-U&I dated 12th September, 2013 had conveyed the sanction of the Government of India for the implementation of the Programme on Energy from Urban, Industrial and Agricultural Wastes / Residues during 12th Plan period. In this Program, MNRE had defined the eligibility criteria for the waste to be considered for MSW based power projects. **Thus, as defined by the MNRE, the Commission is requested to allow usage of supplementary fuel in the MSW based projects awarded by the concerned Municipal Authorities to the Concessionaire.**

4. **Vineet Sarawagi:**
   i. The cost of technology and other equipments used in the MSW based Power Projects have yet to reach economies of scale and therefore, the capital cost of such projects is on a higher side viz-a-viz other conventional sources of energy. The projects are at the nascent stage. Considering the peculiarity and sensitivity of the specific MSW based Power Generating Project, the tariff could be higher than the Commission's approved Minimum Feed-in Tariff. Accordingly, it is requested that the Commission may consider such Feed-in-Tariff as the minimum norm for tariff determination for MSW based Power Generating Projects.

5. **UP Sugar Mills Cogeneration Association:** Tariff for Bagasse based Co-gen plants be continued to be determined under the preferential tariff route as central govt. has not yet notified any guidelines and SBD for the same and CERC has also adopted preferential tariff for the same.

Analysis and Decision of Commission:

Taking into consideration the views and suggestion of stakeholders, the Commission finds it appropriate to have the following:

For Solar, Bagasse and Biomass based generation and co-generation:
The Commission opines that procurement of Solar power (above 5 MW), power from Bagasse based generation and cogeneration plants and Bio-mass based power from plants commissioned after 1st April 2019 should be through bidding route only. The Tariff for Solar power less than 5 MW shall be the weighted average tariff of Solar projects above 5 MW discovered through Competitive Bidding in last Financial Year and adopted by the Commission.

For existing plants of Bagasse and Biomass based generation and cogeneration plants, the Commission has determined Feed in tariff.

For existing Solar power plants, the levelized tariff for projects commissioned in FY 2014-15 shall be Rs 7.06/ kWh for 25 years, as provided in UPERC CRE Regulations, 2014.

The Commission vide Order dated 23.08.2017 in the matter for Solar Tariff for FY 2015-16 to FY 2017-18 opined that the tariff for Solar Grid Connected PV Plants from FY 2015-16 onwards shall be project specific.

For waste-to-energy plants:
Project specific tariff for new projects with a ceiling rate of Rs 7/kWh. For existing plants, the Commission has determined generic tariff in line with CERC RE Regulations, wherein tariff consisting of only Fixed cost is determined with the following considerations:

- PLF is increased to 75% from 2nd year onwards.
- Capital cost is Rs 1500 lakhs for project commissioned in FY 2014-15 with escalation rate of 3%.
- Auxiliary consumption- 5%
- Operation & Maintenance expenses- 6% of the capital cost
- Heat Rate- 4200 kcal/kWh
- Gross calorific value- 2500 kcal/kg

For Solar power projects under RSPV Regulations based on Gross metering:
The Commission has settled the matter under UPERC RSPV Regulations, 2019.

For Small Hydro Plants (SHP):
The Commission opines that for new projects it will be Project specific tariff or as approved by the Commission. For existing plants, the Commission has determined Feed in tariff.

For Wind based power projects commissioned on or after 1st April 2019:
The Commission shall determine project specific tariff for projects commissioned on or after 1st April 2019.

III. Tariff structure of Captive and Renewable Energy Generation:

Commission's Proposal:

a) There can be three- part tariff structure for renewable generation covered under Section 62 of the Act similar to proposed tariff structure of CERC as provided above, for conventional plant providing only partial recovery of fixed cost for the quantum falling short of targeted PLF.

b) For existing captive and RE projects, for their fixed cost component, a levelized tariff for their remaining useful life can be set. Whereas, the variable/ fuel cost component may be specified on coal equivalent basis - weighted average coal price of pit head plants of UPRUVNL for last Quarter of previous FY which shall be applicable for that FY.

Comments:

1. UPPCL:

Three- part tariff structure:

i. A two part tariff operates well in the power deficit scenario where the demand ensures optimum utilization of generating assets by procurement to the extent of declared availability. In this manner, the procurer is able to get electricity at reasonable per unit cost through optimum utilisation of asset.
ii. CERC has proposed a three tariff structure in its concept paper primarily in view of the shortfall in recovery of fixed cost of the conventional generating stations.
iii. Notably in a situation of lower off-take by the procurers, the entire power made available by the generators is not dispatched owing to poor demand of the procurer. Thus, in a situation of reducing PLF of thermal generating stations over past few years, the said three-part tariff structure has been proposed.
iv. The State of Uttar Pradesh still has plenty of demand to avoid such a situation. In view thereof, there is no point in implementation of a three part tariff structure in the State.

Fixed cost

i. It is suggested that to provide for tariff certainty in the remaining useful life of the biomass based power projects and bagasse based co-generation projects, a Levelised fixed charge should be determined based on the provisions in the corresponding control periods. Even though the upcoming PPAs will be signed on competitive bid basis, a Levelised fixed charge may be determined for the new projects to indicate the level of tariffs for sub 5 MW projects.
ii. As for the variable component, it should be the one decided in this Regulation. The Levelised fixed charge determined by the Commission in this Regulation should be applicable to the projects for which PPA would be signed and project would be commissioned from the date of issue of its notification. For the older projects, all the provisions as given in the earlier Regulations for their respective control period should prevail. Additionally, the Commission is requested to ensure that the biomass and bagasse based generation projects must undertake annual energy audit through the energy auditors empanelled by the State nodal agency.

Variable cost

The Commission changed its approach of determining the price of bagasse from "equivalent heat value of coal considering ***pit-head coal***" to the approach based on "equivalent heat value of coal considering ***landed price of coal including transportation cost***", vide its Order dated 11.1.2010 in Petition No. 636/09 & 637/09. The transition of approach from considering the '**pit-head coal cost**' to '**landed cost of coal including transportation**' provided extra advantage to the co-generators in terms of fuel price. This change in approach led to steep y-o-y increase of around 34% in the notional price of bagasse during 2009-10.

It is further submitted that an escalation of 5% was also allowed y-o-y vide the CRE Regulations, 2015 on the price of bagasse, which has resulted in an artificially high price of bagasse, and therefore in bagasse based power, in the present scenario. In view thereof, the co-generation power in the State has been incentivised besides others, by way of higher cost of bagasse, reduced normative PLF, increased incentive for generation beyond normative PLF, linear annual escalation @5-6%. The bagasse cogeneration plants are equivalent to pit-head plants as they consume their own bagasse generated out of the sugar crushing process. Hence, transportation cost cannot be attributed to bagasse. Further, the cost elements such as royalty, surface transportation charges, sizing charges, environment cess, taxes, etc. are specific to coal only and are not applicable in case of bagasse. These are either linked with actual costs or are Govt. taxes imposed on coal being a national resource.

Bagasse being the by-product of sugarcane processing, power generation from bagasse based plants is based on the locally available fuel resource unlike, the coal based power plants where the coal mines for the non-pit head generating stations are generally located at 500-1000 kms. from the stations. The cane production and bagasse production in the State occur within a reasonably small geography not comparable with the large distances of non-pit head power stations from the coal mines. Therefore, the following inconsistencies exist in pricing of bagasse:

- Consideration of landed cost of coal is erroneous as it includes transportation cost. The bagasse cogeneration plants are equivalent to pit-head plants as they consume their own bagasse generated out of the sugar crushing process.
- Cost elements such as royalty, surface transportation charges, sizing charges, environment cess, taxes, etc. which are applicable on coal ought not to be considered for bagasse pricing. These are either linked with actual costs or are Govt. taxes imposed on coal being a national resource.
- Yearly escalation of 5%-6% without any review of actual increase also merits reconsideration. The market price of bagasse, if any, for alternate use would be reduced to marginal pricing if the off-take by distribution utilities is curtailed**.**

Such elements should not be considered for computing the normative value of bagasse.

Similarly, for other biomass based generation (rice husk etc.), only the RoM price of coal & transportation cost upto 100 KMs ought to be considered since biomass is adequately available within such distance.

2. **Rama Shaker Awasthi**:

There seems to be no advantage of 3-part tariff. It is proposed to continue the existing tariff pattern. Also, 2-part tariff may be implemented for Bagasse and Biomass power for merit Order operation purpose with clear guidelines not to pay any fixed cost at the time of plant stoppage by UPPCL/ Discom.

3. **UP Sugar Mills Cogeneration Association:**

A) Three- part Tariff

There is no necessity for 3-part tariff. Bagasse based cogeneration plants are designed to supply surplus power and are not independent power plants to supply to a fixed quantum of power. So, 3- part tariff for Bagasse based Co-gen plants should not be adopted and existing tariff structure under CRE Regulations, 2014 is to be continued.

B) Existing Projects- Levelised Tariff

The proposal deviates from the existing tariff fixation methodology without justification and has detrimental impact on the tariff. There cannot be a change in methodology for fixed component at this stage when the cost has already been incurred and the cogenerators have arranged their affairs on the basis of existing methodology provided by the Commission. A levelised tariff for remaining period would affect the cash flow and commercial viability of the plant.

B) Variable/ Fuel Component

It is submitted that the existing methodology by taking into account the cost of fuel based on equivalent heat value of landed cost of coal for all thermal stations in the State may be continued. Though Cogen plants are located at load centre as noon pit head thermal power station, the Bagasse price should have been determined as equivalent coal price of non- pit head based thermal power stations. Bagasse cost may be determined as in earlier regulations, with existing escalation rate of 5%.

Analysis and Decision of Commission:

The utilities have unanimously opposed the 3- part tariff structure for renewable

generation projects. Hence, the Commission has opined to continue with the existing framework of 2- part tariff structure.

For existing captive and RE projects, for their fixed cost component, the Commission opines to continue with the 2- part tariff for their remaining useful life. For variable/ fuel cost component for Bagasse and Biomass based power plants, the Commission opines to link it with coal equivalent basis i.e. weighted average coal price of pit head plants of UPRUVNL for last Quarter of previous FY which shall be applicable for that FY after deducting coal transportation charges and relevant cess and duties thereon. However, the tariff for Bagasse and Biomass Based power plants shall be capped to the price agreed between the parties under PPA, if it is lower than the Feed in tariff.

For Captive power plants:

The Commission vide Order dated 03.01.2018 in Petition No. 1258/59/60/61/62 of 2018 in the matter of Bajaj Energy Limited opined that the Petitioner will be entitled to variable cost, the main elements of which will be:

- Gross Station Heat Rate (GSHR) will be reduced from 2890 kCal/kWh to 2840 kCal/kWh.
- The Specific Fuel Oil Consumption (SFOC) will be reduced from 1.00ml/kWh to 0.25ml/kWh.

Therefore, incorporating the above findings of the Order, the Commission has decided to have the following:

Gross Station Hear Rate- 2840 kcal/kWh (only pit head coal cost)
Auxiliary Power consumption- 9.50%
Specific Fuel Oil Consumption- 0.25 ml/kWh

For Bagasse Based power plants:

The Commission vide Order dated 13.06.2018 in Petition No. 1276 of 2018 in the matter of seeking review of the norms of Bagasse generation in terms of CRE Regulations, 2014 opined that the matter will be taken up further at the time of revision of aforesaid Regulations. Also, now that UPPCL has successfully conducted Bidding of Bagasse based power with the ceiling of Rs 4.81/kWh.

Therefore, considering the suggestion made by the utility and the price discovered by UPPCL under latest Bidding process, the Commission has decided to have the following:

Price of Bagasse- Rs 1000/MT (only pit head coal cost)
Rate of interest on loan- 10.66%
Rate of interest on working capital- 11.66%

IV. Suggestion on normative parameters (for all technologies)

Commission's Proposal:

a) The Financial and Operating parameters can be reviewed for RE power with reference to prevailing parameters, CERC and other states.

b) Whereas for captive power plant based on conventional fuel, it is proposed that GSHR shall be kept at 2840 Kcal, Specific oil consumption at 0.25 ml and Auxiliary Power Consumption (APC) at 9.5%.

Comments

1. **UPPCL:** The suggestions in respect of the normative parameters for fixed cost determination as submitted by UPPCL are presented herein below:

Project	Parameter	Comments of UPPCL
For Bagasse & Cogeneration Plants	Capital cost (Rs lakhs/ MW)	Should be same as CERC (RE Tariff) Regulations, 2017 i.e. 492.5 (reviewed every year)
	Interest Rates	May be like CERC- 9.97% in respect of long term loans and 10.97% in respect of working capital loans
	ROE	May be fixed at 14%.
	O&M expenses	4% year on year escalation should be there
	SHR (kcal/kWh)	Should be 3240

2. **Rama Shanker Awasthi:** Suggestions for normative parameters for all technologies as submitted by Sri Rama Shanker Awasthi are as follows:

- **Capital cost**- A detailed study of various plants may be done to ascertain the capital cost. Present cost is very high.
- **Working capital-** There is practically no storage of Bagasse in any plant during and after season except the left-over Bagasse during sugar plant operation. When there is no stock of Bagasse except very small quantity no working capital should be considered and hence there is no meaning of Interest on working capital.
- **Station Heat Rate-** Most of the plants are on combination of back pressure and condensing units and operate during season with maximum extraction and minimum condensing. In practical SHR of these plants is not beyond 2600 kcal/kg during season and during off- season SHR goes high due to fully condensing. Existing SHR may be continued for off season only subject to

UPPCL wants to purchase costly power during off season. Hence, SHR should be separate for season and off- season.

- **Secondary fuel consumption**- In case of Bagasse/ Biomass based power plants this is not applicable because these plants started with dry Bagasse/ Biomass only.
- **Auxiliary power consumption-** Bagasse based plants are not fully matured. So, Auxiliary power consumption can be reduced to 7.5%.
- **Cost of fuel**- Cane cost is decided by State Government after due diligence with the agreement of farmers and industries. Bagasse generation is 30% of cane. Hence, Bagasse price should be 30% of canes price.
- **Transportation cost-** Since, Bagasse is produced within the campus during process of sugar manufacturing, hence, no transportation is applicable.

3. **Essel Infraprojects Ltd.**: Suggestion given by Essel Infraprojects Ltd. are as follows:

Project	Parameter	Comments of Essel Infra
For MSW Plants	Capital cost	Should be Rs 12 Crore/MW for RDF and Rs 19 Crore/MW for Mass incineration based new power stations.
	Interest Rates for long term loans	Should be 400 bp + RBI Bank Rate as on date of Order
	ROE	Should be 16.00% on post-tax basis
	Interest Rates for working capital loans	Should be in accordance with the CERC (RE) Regulations, 2017 with rate 500 bp + RBI Bank Rate as on date of Order
	SHR (kcal/kWh)	Should be at least 4500
	PLF	Should be 65% for first 2 years and 70% from 3rd year onwards
	Auxiliary Power Consumption	Should be 16%
	GCV (kcal/kg)	Should be on the basis of Waste Characteristic Report of a particular area of location of the Plant

Further, it requested the Commission to allow the provision of Periodic Maintenance Expenses equivalent to 10% of the Project Capital Cost to be incurred in every 5 years.

4. **UP Sugar Mills Cogeneration Association:** Normative parameters as per CRE Regulations, 2014 may be continued.

5. **Vineet Sarawagi**:

In case of MSW tenders being awarded on Bid Parameter of Revenue Sharing methodology, the model for Revenue sharing should be applicable only on tariff that may be awarded/approved (if applicable) by Commission, over and above the Minimum Feed-in-Tariff as determined by the Commission.

Analysis and Decision of Commission:

Taking into consideration the views and suggestion of stakeholders, the Commission finds it appropriate to have the following:

For Bagasse Based power plants:
Return on Equity- 15%
O&M escalation- 2.5% year on year escalation should be there
Station Heat Rate- 3200 kcal/kWh
For rest of the parameters, the Commission opines to keep the existing provisions without any change.

For Biomass Based power plants:
Station Heat Rate- 4200 kcal/kWh
Gross calorific value- 3200 kcal/kg
Price of Biomass- Rs 2585/MT

V. Applicability of ABT mechanism

Commission's Proposal: Whether, in view of developments in centre as well as state sector, all RE should be brought into ABT regime?

Comments:

1. **UPPCL:**
   i. Presently, a large quantum of RE power is being injected into the grid without giving a schedule to the Load despatch centre. Undoubtedly, this introduces uncertainty in the system. The Commission has issued the Uttar Pradesh Electricity Regulatory Commission (Forecasting, Scheduling, Deviation Settlement and Related Matters of Solar and Wind Generation Sources) Regulations, 2017 that provides the mechanism for forecasting, scheduling, commercial & deviation settlement for wind and solar generation sources. The scope of these Regulations may be broadened to include all RE sources such as Biomass, Bagasse, which will ensure adequate grid discipline by all generating stations without discrimination and take care of any commercial impact on account of deviation from the schedules.

ii. Biomass/ Bagasse based generators have been exempted from UI mechanism but not from day ahead scheduling under ABT, with the exception that on operation actual generation should be deemed as the actual schedule.

iii. With significant increase in share of renewable energy in total energy portfolio, frequent increase or reduction in energy injection within short duration may not be in the interest of safe, smooth and reliable grid operations. The system operator must have fair idea of possible energy injection from all the energy sources including that of Biomass & Bagasse based generators. Biomass & Bagasse based plants must be scheduled based on the "Merit Order" principles. These projects have an established fuel management chain (in-house or otherwise) and unlike wind/solar they do not depend on the vagaries of nature in so far as the dependency on weather is concerned. These are amenable to scheduling for day-to-day operations.

iv. All the generating stations in the State must get scheduled as per Merit Order Stack and no preferential treatment should be given to any generating station whether owned by state, centre or private developer by allowing them exemption from UI/DSM.

v. CERC has specified such scheduling norms since 2009. Similarly, several other comparable states in the country have also mandated such scheduling of Biomass based power plants. In view of the aforementioned reasons, it is pertinent that since generation from Biomass and Bagasse based generation projects is predictable, it can be scheduled in accordance with the intra-state ABT guidelines along with their exposure to UI/DSM. The smaller size projects may be exempted from such provisions due to its small size and difficulties of monitoring by the SLDC.

2. Renew Power:

- Wind and solar energy are of infirm nature and their generation pattern is subject to change depending on multiple factors of environment which are external to the generator and beyond their control. In such a scenario, mandating the entire responsibility of forecasting and scheduling accurately (for each time block of 15 minutes) on the generators is unfair and beyond the principles of natural justice.
- Some generators have in the past based on the earlier RRF framework proposed by the Central Commission have done forecasting and scheduling albeit without any commercial impact. Even after diligently following the scheduling and forecasting after bringing on board reputable forecast service providers exercise the generators were not able to maintain generation within the tolerance band of ±30%.

- **Hence, it is suggested that wind, solar and its hybrid plants should be exempted from applicability of ABT mechanism.** However, if the Commission deems fit it can frame Scheduling and forecasting regulations for wind and solar based projects in line with the model regulations floated by Forum of Regulators.

3. **Rama Shanker Awasthi:** ABT mechanism should be implemented for all RE based power station due to following reasons:
   i. Bagasse and Biomass based plants are running from long duration and now fully matured technically and operationally.
   ii. Grid discipline needs to be maintained.
   iii. RE power generation has increased in the State, now can affect grid discipline if sudden/ unplanned variations are made.
   iv. Discoms/ SLDC already represented for ABT mechanism.

4. **Essel Infraprojects Ltd.**

   In case of MSW based Waste to Energy Power Projects, it is difficult to control the instantaneous heat input on account of heterogeneous and bulky fuel and, therefore, it is not possible to predict the instantaneous power generation in advance. Accordingly, **the power generation from MSW based Waste to Energy Power Projects should be exempt from implementation of ABT mechanism for energy sale to DISCOMs and 3rd Party.**

5. **UP Sugar Mills Cogeneration Association:**

   ABT Meters are installed at interconnection point of respective generators. Must run status of Bagasse based Co-gen plants should be continued as CERC has also recognised the same.
   PPA entered into between UPPCL/ Discoms and generators provide for continuity of service and recognize only 3 emergency conditions wherein the scheduling from the Bagasse based Cogeneration plants can be stopped. Scheduling for Bagasse based Cogen plants would be difficult and impractical and impractical as the Bagasse base degeneration is primarily associated with sugar mills and the operation of sugar mills would affect the forecasting. The fuel management for such cogeneration plants, particularly due to their small size is complex and are not amenable to the 100% accurate scheduling requirements. Hence, the Scheduling will not be proper and may change.

6. **ITC Limited:** Solar Energy is an infirm source of power and the return on investments in solar power plants are solely dependent on the extent of generation from the project which is variable, uncertain and contingent on vagaries of nature. It is suggested that the Forecasting, Scheduling, Deviation Settlement and Related matters should not be made applicable for individual Solar generators.

Analysis and Decision of Commission:

The Commission taking into consideration the views and suggestion of stakeholders, finds it appropriate to include all RE sources except SHP and MSW based plants under ABT regime with DSM mechanism which will ensure adequate grid discipline by all generating stations without discrimination and will take care of any commercial impact on account of deviation from the schedules.

Therefore, Solar, Wind, Biomass & Bagasse based plants shall be scheduled based on the "Merit Order" principles in accordance with the **intra-state ABT guidelines along with implementation of DSM charges as well**. The DSM mechanism for **Solar and Wind based plants** is already formalised by the Commission under UPERC (Forecasting, Scheduling, Deviation Settlement and related matters of Solar and Wind generation sources) Regulations, 2018**.**

Deviation charges for under or over injection by **Biomass & Bagasse based plants** shall be accounted for and settled in accordance with the provisions of the CERC (Deviation Settlement Mechanism and Related Matters) Regulations, 2014 as amended from time to time. The accounting for this purpose shall be done by the SLDC. For Biomass & Bagasse based plants, for recovery of full capacity charges, the PLF on actual or scheduled availability, whichever is lower, shall be 50% of Annual Fixed charges (AFC) which is provided in Schedule II- A and B respectively, of these Regulations. Recovery of capacity (fixed) charges below the level of targeted PLF shall be on *pro rata* basis. At zero PLF, no capacity charges shall be payable.

VI. Banking issues

Commission's Proposal: Whether, any changes are required in existing provisions of banking under the Regulations?

Comments:

1. **UPPCL:**

Banking provisions should not be relaxed for any RE project since the power Intermittency is going to be a graver concern in the years to come owing to the Increased RE injection. Further, it will be tougher for the state Discoms to complement the Energy Banked (virtual) by RE generators through other Non-RE sources which are now costlier resources than the renewables.

2. Amplus Energy Solutions Pvt. Ltd.:

- Drawl of banked energy is allowed during period of emergency or shut down or maintenance of the plant in the CRE Regulation. It is requested to kindly clarify whether the Solar developers are allowed to draw/Schedule banked energy for captive consumption/Third party sale.
- Drawl of banked of energy is not allowed during 17:00 hrs to 22:00 hrs. However, the Commission has not considered the present TOD time slot for withdrawal of banked energy. Therefore, the Commission should clarify whether withdrawal of banked energy is allowed during Peak TOD period or not. It is to be highlighted that due to inherent nature of solar energy plant no or minimal energy is produced during the mentioned TOD period/ evening peak TOD period. There is an unavoidable requirement to draw energy during such periods. **So, it is requested that the Commission may allow withdrawal of banking energy on mentioned specific period in the CRE Regulations, 2014.**
- Day ahead schedule on withdrawal of banked energy along with the daily generated energy might create contingency on daily schedule of energy, so the condition should be removed. Further, it is also suggested that the banked Energy will be scheduled and settled in 15 min time block = Minimum of (Banked energy available, Banked energy requested for drawl) in kWh / (72 time blocks × Actual no. of days in month during which drawl is requested).
- As per the clause 40.1 (g), CRE Regulations, 2014 energy banked during a financial year can be carry forwarded to next financial year. However, Commission has not specified any specific percentage of energy to be carry forwarded. **So, it is suggested to elaborate the procedure how banked energy will be carry forwarded to next financial year.**
- As per the present regulation unutilized banked energy should be deemed consumed by DISCOM and financial settlement should be made at the schedule tariff. However, the Commission has not defined schedule tariff for solar power on year to year basis on the basis of capital cost and other involved cost to set up a project. **So, it is suggested that the Commission should consider portion of banked energy which will remains un-adjusted at the end of Financial Year, would be construed as energy purchased and the payment for the same will be made by the Distribution Licensee at the APPC price determined by the Commission from time to time.**
- The Commission determined banking charges for RE Generating captive power plant at 12.5% and for Solar at 6%. Two different banking charges create ambiguity between Solar Captive generators. A solar power plant can be set up

under third party mode as well as captive mode also. However, for the same nature of sources two different banking charges on two different investment mode create discrimination as per the Article 14 of the Indian constitution. **So, it is requested that the Commission should consider consistency on banking charges and charge 6% of the energy injected should be charged as banking charges in kind for solar power projects setup under captive as well as third party mode.**

- The Commission has decided to extend banking facility up to 100% of the generated energy for RE generating plant as per the clause of 40.1 (a) of the CRE Regulation 2014. Allowing maximum 75% of the banking energy for RE captive generating plant is unrealistic when 100% of the generated energy is allowed for banking on RE power set up under non-captive mode. **So, it is requested that the same should be extended to RE generating plants set up under captive mode also.**
- Since, the facility of banking is provided for solar power to utilize the excess energy of the previous month, while calculating maximum demand banked withdrawal of banked energy shouldn't be considered. **So, it is proposed that the Commission may waive-off the requirement of considering withdrawal banked energy also while calculating the maximum demand.**

3. Renew Power:

- Drawl of banked energy is allowed during period of emergency or shut down or maintenance of the plant in the CRE Regulation. It is requested to kindly clarify whether the Solar developers are allowed to draw/Schedule banked energy for captive consumption/Third party sale.
- Day ahead schedule on withdrawal of banked energy along with the daily generated energy might create contingency on daily schedule of energy, so the condition should be removed. Further, it is also suggested that the banked Energy will be scheduled and settled in 15 min time block = Minimum of (Banked energy available, Banked energy requested for drawl) in kWh / (72 time blocks × Actual no. of days in month during which drawl is requested).
- As per the present regulation unutilized banked energy should be deemed consumed by DISCOM and financial settlement should be made at the schedule tariff. However, the Commission has not defined schedule tariff for solar power on year to year basis on the basis of capital cost and other involved cost to set up a project. **So, it is suggested that the Commission should consider portion of banked energy which will remains un-adjusted at the end of Financial Year, would be construed as energy purchased and the payment for the same will be made by the Distribution Licensee at the APPC price determined by the Commission from time to time.**
- The Commission determined banking charges for RE Generating captive power plant at 12.5% and for Solar at 6%. Two different banking charges create ambiguity between Solar Captive generators. A solar power plant can be set up under third party mode as well as captive mode also. However, for the same nature of sources two different banking charges on two different investment

mode create discrimination as per the Article 14 of the Indian constitution. **So, it is requested that the Commission should consider consistency on banking charges and charge 6% of the energy injected should be charged as banking charges in kind for solar power projects setup under captive as well as third party mode.**

- The banking facility for captive generating plants uses contract demand with the Distribution licensee at many places. It is requested that the commission may kindly clarify how the plants with no contract demand with the distribution licensee will be dealt for purpose of banking of energy

4. **Rama Shanker Awasthi:** Banking of Bagasse based power should be allowed equal to the auxiliary power consumption of PPA quantum during season only because withdrawal of Banking power is needed only for start of the power plant.

5. **Open Access Users Association:**
   i. To allow the solar generators to settle the excess generated unit in the non-generating hours.
   ii. To introduce the concept of "carry forward of the excessively generated units" in the next month then finally settle the balance energy supplied by the plant at the rate specified for supply of electricity to distribution Licensee on yearly basis.

6. **ITC Limited:**
   i. Considering the fact that Solar power is infirm in nature, Banking of the generated energy should be allowed upto 100% of the RE based captive power plant.
   ii. Since Solar power is infirm in nature, there should not be any restriction on the withdrawal of the banked energy.
   iii. As per existing regulations, Banking Charges for Solar based RE plants is 6%, whereas, for Captive plants it is 12%. In order to promote RE based captive power plants in the State, Banking charges should be 6% for them.
   iv. It is requested to provide an illustration of the mechanism for power withdrawal scheduling, dispatch, energy accounting, UI accounting & settlement system of banked power from an off- site solar power plant.

7. **Hindalco:**
   i. Hindalco should be allowed to withdraw energy during peak hours i.e. 1700 to 2200 hours to the extent of quantum supplied during peak hours in the same half year of the financial year.
   ii. Captive power plants should be allowed to bank 100% of the energy supplied to the Licensee. In case, the Licensee is interested to bank upto 75% energy only, then rest 25% energy should be considered as sale to the Licensee.

iii. Captive Power Plants should be allowed to withdraw the banked power either in the same year or subsequent FYs till the expiry of the agreement.

iv. Energy banked during the last FY of previous Regulations or agreement will be allowed to be withdrawn in the first FY of subsequent Regulations or agreement.

8. UP Sugar Mills Cogen Association

It is submitted that the present system of banking should continue.

9. Grasim Industries Ltd.

i. Compliance of Day ahead scheduling for Banking as well as withdrawal of Banked Energy is not possible since nature of such energy of plant is not firm. So, in view of that it should be exempted from Day ahead scheduling while Banking as well as withdrawal of Banked Energy.

ii. Industries should be allowed to withdraw power for the purpose other than as mentioned in the Regulations.

iii. Under existing Regulations, cost of Energy being sold under Banking arrangement is too less which may be considered while finalizing tariff due to increasing trend of coal prices. So, prices of sold Banked units may be increased considering that there is too much increase in coal prices.

iv. The Commission has allowed for withdrawal of banked power in peak hours but a limit has been imposed that quantum supplied during peak hours can only be withdrawn in peak hours. Any restriction in drawing banked power in peak hours is basically a commercial decision of the Licensee since Licensee sells its power to generator on higher cost in peak hours. In view of this, they are compelled to draw costly power since, the industry is of continuous process, power intensive and hazardous in nature. So, it is requested that they should be allowed to withdraw energy as and when require without any restriction.

Analysis and Decision of Commission:

The Commission taking into consideration the views and suggestion of stakeholders, finds it appropriate to have the following provisions for Banking of power:

For RE / Captive RE Plants:

- Banking charges shall be 6% for Solar and Wind power based generating plants and 12 % for other technologies.
- Quarterly settlement of Banked energy

For Captive Plants (non- RE):

- Banking charges shall be 12%.

- The banked energy in a particular Financial Year (FY) could be utilized in the same FY or the balance can be carried forward to the next FY.

Common for RE / Captive RE and Captive (non- RE) Plants:

- Banking of energy upto 100%
- Withdrawal shall be allowed only as per TOD system i.e. withdrawal of power in the peak/ off- peak hours shall not be more than the power banked in that respective time slot
- The banking as well as withdrawal of power shall be subject to day ahead scheduling
- Banked energy remaining unutilized on the expiry of the quarter would be treated as sale to the Distribution Licensee and the financial settlement shall be made at average power purchase cost (APPC) or PPA entered with the Distribution Licensee, whichever is less. Banking charges shall be deducted from such unutilized banked energy.

Other Comments

1. **Applicability of Additional Surcharge and Cross Subsidy Surcharge:**

Amplus Energy Solutions Pvt. Ltd.: UPERC CRE Regulations, 2014 has provided exemption on additional surcharge and surcharge for captive power plant as per the Electricity Act, 2003. To promote investment in Solar Captive-OA Solar consumers should be exempted from payment of surcharges. It is requested to provide exemption on applicability of Additional surcharge for captive use of Renewable Power also**.**

Open access Users Association: It is requested to waive off the wheeling charges, cross- subsidy charges, Transmission & distribution charges and additional charges for 3rd party sale/ OA consumers for energy from ground mounted or roof top solar power till the state does not become a power surplus state.

Indian Electricity Regulatory Services: If cross subsidy surcharge (CSS) is levied from the Captive consumers then the very purpose of availing electricity of Open access route will be defeated. So, it is requested not to levy CSS from the Captive consumers.

Analysis and Decision of Commission:

The Commission has made the Draft Regulations as per the provisions made under the Electricity Act, 2003.

2. **Capacity of Renewable Energy Generating Plants:**

Amplus Energy Solutions Pvt. Ltd.: As per UPERC CRE Regulations, 2014 a person can setup a captive generating power plant as per his requirement and optimum capacity can be assessed by potential of electricity generation. However, absence of transparent direction on contracted capacity related to any consumers without any sanctioned load/contract demand is forming blockade to set up solar captive power plant over and above contract demand in the state.

Renew Power: Requested the Commission to provide clarification on whether capacity of a solar project can be higher than contracted demand/ sanctioned load of the captive consumer. Solar projects run at CUF (capacity utilization factor) of 17% to 19%. Therefore, a consumer willing to offset its maximum consumption from solar will be required to setup larger plant capacity with respect to its consumption in kWh.

Analysis and Decision of Commission:

The Commission has clearly mentioned in the Draft Regulations that the capacity of the plant shall be based on the need of a person intending to establish a Captive Generating Plant. Further, the location, fuel linkage and other required resources may be in conformity with the National Electricity Policy and National Electricity Plan, as amended from time to time.

3. Open Access along with Net Metering Mechanism:

Amplus Energy Solutions Pvt. Ltd.: For Net Metering import and export of energy happens in real time and in Open Access energy is offsetted on the basis of scheduled given for each 15 minute time slot. So, energy consumed under Net Metering and Open Access wouldn't cause any intermingling of energy, as first one accounted on real time basis and second one off-set on given energy schedule basis. So, a premises connected to the grid of UPPTCL/Discom can avail both Net metering and Open Access simultaneously. However, there are no such clarity in the present Regulations and guidelines in place by hon'ble Commission. **So, it is requested to clarify that a consumer availing open access can also avail Net Metering under a single point special energy meter.**

Analysis and Decision of Commission:

The Commission has made Rooftop Solar PV Regulations, 2019 under which the provisions of Net Metering arrangement are clearly defined.
Also, the Commission has defined the provisions of Open Access arrangement under UPERC (Terms and Conditions for Open Access) (First Amendment) Regulations, 2009. For the sake of brevity, the same is not repeated here.

4. **Separate provisions for RE based captive power plants:**

   Amplus Energy Solutions Pvt. Ltd.: UPERC CRE Regulations, 2014 put all types of captive power plants (both renewable and non- renewable source based) under captive category. In order to promote renewable based plants in the state, it is suggested to include separate provisions for RE based captive power plants

Analysis and Decision of Commission:

The Commission has suitably made the provisions for RE based Captive plants in the Draft Regulations.

Some other comments by Sri Rama Shanker Awasthi

5. RPO compliance should be low cost basis, considering all RE power are same. This will avoid procurement of costly power from UPPCL/Discom.
6. There has to be a separate tariff for season and off- season due to major changes in SHR and auxiliary consumption.
7. Waste to energy should be defined to submit comments.
8. To supply energy, upper limit of PPA capacity should be fixed, earlier it was 10% over PPA capacity
9. All Bagasse based plants' PPA should be permitted for capacity after due diligence of proper documents like- DPR, plant manufacture specification document etc. It should be revisited for last 5 years on actual supply and PPA contracted capacity for correction
10. COD to be defined in the Regulations as per CEA's definition. COD to be implemented for all RE sources before injection of power in the Grid.
11. All Bagasse based plants should be charged for kVAR from Grid. ABT Meters needs to be calibrated for proper P.F. recording percentage.
12. AMR Metering system should be implemented in all RE sources plants and should be periodically checked.

Analysis and Decision of Commission:

The Commission has suitably addressed the issues in the Draft Regulations.

Some other comments

13. **Vineet Sarawagi:** Incorporation of a single Power Procurement Entity for the State for all Discoms which will lead to expedite such process of signing of PPAs and payment for power supply.
14. **Hindalco:** Annexure 2 and 3 of existing UPERC CRE Regulations, 2014 should be modified on requirement basis.

Analysis and Decision of Commission:

The Commission has made the suitable provisions in Draft Regulations.

Evacuation cost (cost of construction of sub-station and transmission line):

In existing CRE Regulations, 2014, provision is made for cost of construction of sub-station and transmission line for RE power, as shown below:

> *"In case of Solar, wind and small hydro based power plants, as a promotional measure, the grid connectivity at approved voltage shall be provided by the Distribution Licensee and the total cost on construction of sub-station and transmission line including bay etc. shall be borne by Distribution Licensee of the area. In case, the sub-station / transmission line comes under STU / any other Transmission Licensee, the same shall be borne by STU / any other Transmission Licensee."*

The Commission has found it appropriate to remove such provisions from the Draft Regulations as the RE technologies have now reached to a level of maturity.

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