



Uttar Pradesh Electricity Regulatory Commission

Notification No.: UPERC/Secretary/CRE Regulations/ 2014/1807

Dated: 20/01/2015

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, 2014

(CRE Regulations, 2014)

CHAPTER - 1

PRELIMINARY

1. Short Title and commencement

1. These Regulations shall be called the UPERC (Captive and Renewable Energy Generating Plants) Regulations, 2014 (hereinafter referred to as CRE Regulations, 2014).
2. These Regulations shall be reckoned to have come into force from 1 April, 2014 and shall remain in force up to 31 March, 2019, 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 and renewable sources for generation and co-generation.
2. The provisions of Availability Based Tariff (herein after referred to as 'ABT') in respect to functions, duties and obligations, as provided, for Generating Plants under ABT shall apply to these Generating Plants also, unless provided otherwise.



3. For Generating Plants commissioned on or after 1.4.09, 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 beneficiaries 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 beneficiaries.
4. Annual Energy Audit of each Generating Plant shall be compulsory under relevant provisions of Energy Conservation Act, 2001.
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 to 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 parties 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 & 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 is given in Schedule II (F) of these regulations.

Provided that for any renewable energy technologies 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 covered under these regulations), commissioned prior to 1.4.2014 and for whom tariff was earlier determined as per then prevailing regulations.

Provided further that in case of fossil fuel based co-generation tariff may be determined by the Commission on a 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 notified by the Commission 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 intention 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;
- d. “COD” or “Date of Commercial Operation” shall mean the date on which the generating plant is synchronized with the grid system
 - e. “CERC” means the Central Electricity Regulatory Commission;
 - f. “CRE Regulations,2014” means UPERC (Captive and Renewable Energy Generating Plants) Regulations, 2014 as amended from time to time
 - g. “Commission” means the Uttar Pradesh Electricity Regulatory Commission;
 - h. “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;
 - i. “Control Period” means a period during which the principles and norms for determination of tariff specified in these Regulations shall remain valid;
 - j. “Existing Generating Station” means a generating station, which has achieved COD prior to the coming into effect of these Regulations;
 - k. “Financial Year” means a period commencing on 1st April of a calendar year and ending on 31st March of the subsequent calendar year;
 - l. “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;
 - m. “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;
 - n. “IEGC” means the Grid Code specified by the Central Regulatory Commission under clause (h) of sub-section (1) of section 79 of the Act;
 - o. “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;
- p. "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;
- q. "MNRE" means the Ministry of New and Renewable Energy of the Government of India;
- r. "New Generating Station" means a generating station with a 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;
- 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 otherwise in this Regulations or by 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. “Reforms Act” means the Uttar Pradesh Electricity Reforms Act, 1999;
 - y. “Renewable Energy” means the grid quality electricity generated from Renewable Energy sources;
 - z. “Renewable Energy Power Plants” means the power plants other than the conventional power plants generating grid quality electricity from Renewable Energy sources;
 - aa. “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;
 - bb. “RLDC” means the Regional Load Despatch Centre established under sub-section (1) of section 27 of the Act;
 - cc. “SLDC” means State Load Despatch Centre established in Uttar Pradesh under sub-section (1) of section 31 of the Act;
 - dd. “UPEGC” means the State Grid Code specified under clause (h) of subsection (1) of section 86 of the Act by the Commission;
 - ee. “UPERC Open Access Regulations” means the Uttar Pradesh Electricity Regulatory Commission (Terms and Conditions for Open Access) Regulations, 2004 as amended from time to time;
 - ff. “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;
 - gg. “Year” means a financial year.
2. Words or expressions occurring in these Regulations and not defined shall bear the same meaning as in the Act.

7. General Power to Amend

The Commission may, at any time and on such terms as to costs or otherwise, as it may think fit, amend any defect or error in any Proceeding before it, and all necessary amendments shall be made for the purpose of determining the real question or issue arising in the Proceedings.

8. Power to Relax

The Commission, for reasons to be recorded in writing, may vary any of 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

9. 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.

10. 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.
2. It shall be the obligation of the Captive Users to ensure the captive consumption at the percentages mentioned in The Electricity Rules, 2005. In case the minimum percentage of captive use is not complied with in any year, the entire electricity generated shall be treated as if it is a supply of electricity by a Generating Company.

11. 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.

3. The provisions of ABT in respect to functions, duties and obligations, as provided, for Generating Plants under ABT 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. All provisions of these Regulations except for those relating to supply in the grid and tariff 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.

12. 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:
 - 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).
 2. In extraordinary circumstances, the Captive Generating Plants shall operate and maintain the plant in accordance with the directions issued by the State Government and the Commission may offset the consequential adverse financial impact of such direction, as it considers appropriate.

13. 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 dispatch 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 Licensee has submitted Power Purchase Agreement to the Commission as mentioned in Regulation 17(1) of these Regulations for approval.

14. 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 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 Commissions.

15. 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).

16. Surcharge and Additional Surcharge:

1. A Captive Power plant shall not be liable to pay surcharge over and above 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, as prescribed under the Act:

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 surcharge over and above transmission and wheeling charges as determined by the Commission.

2. Open Access Consumer receiving supply of electricity from a person other than the Distribution Licensee of his area of supply, shall pay an additional surcharge, over and above transmission and / or wheeling charges and surcharge, as determined by the Commission.

17. Sale of Power

1. A Captive Generating Plant may enter into an agreement with the Distribution Licensee 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 shall pay the transmission charges and / or wheeling charges for such supply, as may be determined by the Commission:

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.

18. 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.

19. Purchase of Electricity

Any person, who establishes, maintains and operates a Generating Plant, may purchase electricity from a Generating Company or Distribution Licensee in case his plant is not in a position to generate electricity to meet the requirement in the event of emergency or shut down or maintenance of the plant including supply to township housing the operating staff:

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 for purposes other than mentioned above, the generator may purchase electricity through a trader or a Generating Company or a Distribution Licensee other than Distribution Licensee of the area in which the plant is located at the rate as mutually agreed however, surcharge and additional surcharge besides other charges shall be payable as determined by the Commission:

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 40(2) if that plant has an arrangement of banking of energy with such Distribution Licensee.

20. Capacity of the Plant & Location

1. The capacity of the plant shall be based on the need of a person intending to establish a Captive Generating Plant. The location, fuel linkage and other required resources may be in conformity with the National Electricity Policy and National Electricity Plan.
2. Captive Generating Plant owner shall clearly mention the fuel linkages in the project report and ensure that Government of India/State Government guidelines regarding use of fuel are complied with.

21. 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

22. 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 Availability Based Tariff shall be implemented and the Generating Plants shall be subject to day ahead scheduling with the exception that on operation, actual generation shall be deemed as the actual schedule.

23. Renewable Energy Source based Generation and Co-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 these sources through competitive bidding when generation from renewable sources shall compete with conventional sources in terms of cost of electricity

24. General conditions for Renewable Energy sources based Generation

These regulations shall apply to:

1. All the Generating Stations existing prior to 1.4.14 generating electricity from RE source based Generation 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. These Regulations shall apply for all new projects to be commissioned after 1.4.14 within Uttar Pradesh for generation and sale of electricity from such projects based on RE sources to all distribution licensees within Uttar Pradesh 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, these Regulations shall apply subject to the fulfillment of eligibility criteria specified in Regulation 25;

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 pricing mechanism and related terms and conditions as outlined under the said UPERC Regulations.

3. All provisions of these Regulations except for those relating to supply in the grid and tariff shall also apply to plants having no connectivity with the grid.

25. 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. Biomass power project: Biomass power project(s) existing and to be commissioned subsequent to notification of these Regulations and using plant and machinery based on Rankine cycle technology and using biomass fuel sources.

Biomass Gasifier: as approved by MNRE

3. 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.

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, Solar rooftop PV systems and other small Solar power projects: Based on Technologies approved by MNRE.
5. Municipal waste based power plants: Based on Technologies approved by MNRE

26. 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.

27. 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.

28. 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. The Generating Plant shall enter into a Power Purchase Agreement with the Distribution Licensee of the area in which the plant is located for a period of 20 years from the date of its commissioning, in line with the Model Power Purchase Agreement (herein after called 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, 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, if any.
3. In extraordinary circumstances, the Generating Company shall operate and maintain the Generating Plant in accordance with the directions issued by the State Government and the Commission may offset the consequential adverse financial impact of such direction on the Generating Company, as it considers appropriate.

29. 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 specific oil consumption 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 dispatch 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 28(2) of these Regulations for approval.

30. Sale of Power

1. All RE source based generating plants shall be allowed to sell power, to the Distribution Licensee in whose area the plant is located at the rate specified in Schedule II:

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.

The Distribution Licensee on an offer made by the said plants for entering into a PPA, the same shall be signed by such Licensee. In case of any difficulty the Generating Company may approach the commission for suitable remedy.

Provided further that the plant shall be allowed to sell the power available after sale to the concerned Distribution Licensee to any other Licensee or a consumer 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 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.

31. 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 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)

32. 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 Commissions.

33. 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).

34. Surcharge and Additional Surcharge:

A person, having established a Generating Plant shall be liable to pay surcharge and additional surcharge if it seeks open access for the transmission/wheeling of electricity from his Plant to a destination for consumption of power for his own use. In case, the power is supplied to a consumer then such consumer shall pay surcharge and the additional surcharge determined by the Commission. Surcharge and Additional Surcharge shall be over and above transmission and / or wheeling charges.

35. Purchase of Electricity by the Plant:

Any person, who establishes, maintains and operates a Generating Plant, may purchase electricity from a Generating Company or Distribution Licensee in case his plant is not in a position to generate electricity to meet the requirement in the event of emergency or shut down or maintenance of the plant including supply to township housing the operating staff:

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 also that in case of purchase of power for purposes other than mentioned above, the generator may purchase electricity through a trader or a Generating Company or a Distribution Licensee other than Distribution Licensee of the area in which the plant is located at the rate as mutually agreed however, surcharge and additional surcharge besides other charges shall be payable as determined by the Commission:

CHAPTER - 4

COMMON TERMS AND CONDITIONS

36. 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. Installed capacity upto 1 MW on 11 KV.
 - ii. installed capacity upto 10 MW on 33 KV;
 - iii. installed capacity above 10 MW on 132 KV;

Provided that rooftop solar PV projects less than 5 kW evacuation of power shall be allowed at single phase connection.

Provided that rooftop solar PV projects greater than and equal to 5 kW and upto 50 kW evacuation of power shall be allowed at 415V.

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 plants where the scheme for connectivity has already been approved by the Commission in PPA and the same are 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, of its own or through any other agency engaged for that purpose. The cost of laying the dedicated transmission line to the substation, 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 0.30 Cr/MW for FY 2014-15 to be escalated at 3% simple 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 18 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.

Provided further that 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 cost incurred thereof shall be allowed in tariff of the Distribution Licensee or STU / any other Transmission Licensee.

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.

37. 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:

38. Metering Arrangement

The Generating Plant shall provide ABT compatible Special Energy Meters 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):

$$\text{Multiplying Factor} = 100 / (100 - 0.001 \times L \times \text{C.C.})$$

L = Length of line in km

C.C. = Contracted Capacity in MW

Loss factor = 0.001/km/MW

39. 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.

40. Banking of Power

1. Renewable Energy source based Generation and Co-Generation Plants:

The Generating Plants may be allowed to bank power, for the purpose of withdrawal of the banked power in the event of emergency or shut down or maintenance of the plant, subject to following conditions:

- a. Banking of energy upto 100%, as agreed between the plant and the Distribution Licensee, shall be allowed.
- b. Withdrawal of power shall be allowed only during the period other than 17:00 hrs.to 22:00 Hrs.
- c. The plants shall provide ABT compliant Special Energy Meters and the monthly settlement of energy sales shall be done based on:
 - i. Power supplied during the peak hours as per SEM meter readings
 - ii. Power banked as per daily schedules given for banking of power during the month.

The lower of the two shall be considered as banked power and monthly settlement shall be done for the balance energy supplied by the plant at the rate specified for supply of electricity to Distribution Licensee:

- d. The banking as well as withdrawal of banked energy shall be subject to day ahead scheduling.
- e. The power withdrawn by the plant as ascertained by SEM readings, which could not be considered as withdrawal from banked power, shall be considered as power purchased by the plant.
- f. Provided that in case of purchase of power by these plants in case the plant is not in a position to generate electricity to meet the requirement in the event of emergency or shut down or maintenance of the plant including supply to township housing the operating staff, 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 in case of purchase of power for purposes other than mentioned above, the generator may purchase electricity through a trader or a Generating Company or a Distribution Licensee other than Distribution Licensee of the area in which the plant is located at the rate as mutually agreed however, surcharge and additional surcharge besides other charges shall be payable as determined by the Commission:

- g. A Generating Plant shall be allowed to withdraw power that was banked during a particular financial year in the same year or during the following financial year.
- h. The banked power remaining unutilized on the expiry of the following financial year would be treated as sale and the financial settlement shall be made at the scheduled tariff for the year during which the power was banked. No banking charges shall be deducted from such unutilized banked energy.
- i. Banking charges shall be 12.5% of the energy banked

Provided that in case of grid connected solar energy based generating stations the banking charges shall be 6% of the energy banked.

2. Captive Generating Plants:

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

- i. The withdrawal of banked energy, subject to deduction of banking charges of 12.5%, shall be allowed during the period other than 17:00 Hrs. to 22:00 Hrs, specified as peak hours.

Provided that any withdrawal during 17:00 Hrs to 22:00 Hrs limited to the quantum supplied during 17:00 Hrs to 22:00 Hrs in the same quarter of the financial year may be allowed by the licensee.

- ii. The plant shall provide ABT compliant special energy meters and the monthly settlement of energy shall be in the following manner;
 - a. A maximum of 75%, as agreed between such plants and the Distribution Licensee, of the energy supplied to the Licensee during the day shall be considered as banked energy and the remaining as energy sold to the Licensee,
 - b. Withdrawal of banked energy shall be subject to deduction of 12.5% of the banked energy as banking charges payable to the Licensee,
 - c. 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 as specified by the Commission, from time to time, in the appropriate rate schedule of retail tariff.

- d. 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.
- iii. The banking as well as withdrawal of power shall be subject to day ahead scheduling.
- iv. The captive plant shall be allowed to withdraw power that was banked during a particular financial year either in the same year or during the following financial year.
- v. The banked energy remaining unutilized on the expiry of the following financial year would be treated as sale to the Distribution Licensee and the financial settlement shall be made at the rate specified by the Commission for the year during which the power was banked. No 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.

41. 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:

Provided further that in respect of, transmission charges, wheeling charges, surcharge and additional surcharge, as the case may be, payable by the Plant for purchase of electricity under these Regulations, the payment mechanism provided under the relevant Regulations shall apply.



42. Miscellaneous 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.

43. Repeal

UPERC CNCE Regulations, 09 shall stand repealed with effective date of these Regulations.

By Order of the Commission

(A K Srivastava)

Secretary



SCHEDULE – I

Tariff for Sale of Power by A Captive Generating Plant

Schedule – I: Tariff for sale of Power by a Captive Generating Plant

As per Commission’s “Uttar Pradesh Electricity Regulatory Commission (Captive and Renewable Energy Generation Plants) Regulations, 2014” (CRE Regulations, 2014).

Tariff for Coal Based Captive Generating Plants

i. Existing Captive units commissioned prior to FY 2005-06

For Captive units Commissioned prior to FY 2005-06, the Commission has considered the same normative parameters as applicable for new plants. Tariff for such units shall be as given in Table-1 below:

Table 1: Existing captive units commissioned prior to FY 2004-05

Total Tariff - Captive Existing Projects (Prior to FY 2005-06)			
Financial Year	Fixed Cost (Rs/kWh)	Variable Cost (Rs/kWh)	Total Cost (Rs/kWh)
FY 2014-15	0.64	1.99	2.63
FY 2015-16	0.66	2.09	2.75
FY 2016-17	0.68	2.19	2.87
FY 2017-18	0.69	2.30	2.99
FY 2018-19	0.71	2.42	3.13

ii. Existing Captive units commissioned during FY 2005-06 to FY 2008-09

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 and is given in Table-2 and Table-3 respectively. Total tariff for such plants shall be as given in Table-4 below.

Table 2: Fixed Cost - Existing captive units commissioned during FY 2005-06 to FY 2008-09

Fixed Cost - Captive Existing Projects (FY 2005-06- FY 2008-09)					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2005-06	0.88	0.60	0.62	0.63	0.65
FY 2006-07	0.94	0.91	0.64	0.65	0.67
FY 2007-08	1.01	1.00	0.98	0.69	0.71
FY 2008-09	1.07	1.05	1.02	1.01	0.70

Table 3: Variable Cost - Existing captive units commissioned during FY 2005-06 to FY 2008-09

Variable Cost – Captive Existing Projects (FY 2005-06- FY 2008-09)	
Financial Year	Variable Cost (Rs/kWh)
FY 2014-15	1.99
FY 2015-16	2.09
FY 2016-17	2.19
FY 2017-18	2.30
FY 2018-19	2.42

Table 4: Total Tariff - Existing captive units commissioned during FY 2005-06 to FY 2008-09

Total Tariff - Captive Existing Projects (FY 2005-06- FY 2008-09)					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2005-06	2.87	2.69	2.81	2.94	3.07
FY 2006-07	2.93	3.00	2.83	2.95	3.09

Total Tariff - Captive Existing Projects (FY 2005-06- FY 2008-09)					
FY 2007-08	3.00	3.09	3.17	3.00	3.13
FY 2008-09	3.06	3.14	3.21	3.31	3.12

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

The fixed & variable costs and the total tariff for the existing plant of unit size upto 100 MW commissioned on or after 1st April 2009 and upto 31st March 2014 shall be as given in respectively Table 5; Table 6 and Table7:

Table 5: Fixed Cost - Existing captive units commissioned during FY 2009-10 to FY 2013-14

Fixed Cost - Captive Existing Projects (FY 2009-10 – FY 2013-14)					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2009-10	1.36	1.32	1.27	1.23	1.19
FY 2010-11	1.45	1.40	1.36	1.31	1.27
FY 2011-12	1.50	1.45	1.41	1.36	1.32
FY 2012-13	1.55	1.50	1.46	1.41	1.36
FY 2013-14	1.60	1.56	1.51	1.46	1.41

Table 6: Variable Cost - Existing captive units commissioned during FY 2009-10 to FY 2013-14

Variable Cost – Captive Existing Projects (FY 2009-10 – FY 2013-14)	
Financial Year	Variable Cost (Rs/kWh)
FY 2014-15	1.99
FY 2015-16	2.09
FY 2016-17	2.19

Variable Cost – Captive Existing Projects (FY 2009-10 – FY 2013-14)	
FY 2017-18	2.30
FY 2018-19	2.42

Table 7: Total Tariff - Existing captive units commissioned during FY 2009-10 to FY 2013-14

Total Tariff - Captive Existing Projects (FY 2009-10 – FY 2013-14)					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2009-10	3.35	3.41	3.46	3.53	3.61
FY 2010-11	3.44	3.49	3.55	3.61	3.69
FY 2011-12	3.49	3.54	3.60	3.66	3.74
FY 2012-13	3.54	3.59	3.65	3.71	3.78
FY 2013-14	3.59	3.65	3.70	3.76	3.83

iv. Captive units commissioned on or after 1st April 2014

The fixed and variable costs and total tariff for the new plants commissioned on or after 1st April 2014 shall be as given in Table 8, Table 9 and Table 10 respectively.

Table 8: Fixed Cost – New captive units commissioned during FY 2014-15 to FY 2018-19

Fixed Cost - Captive New Projects (FY 2014-15- FY 2018-19)					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2014-15	1.75	1.70	1.64	1.59	1.54
FY 2015-16	-	1.81	1.75	1.69	1.64
FY 2016-17	-	-	1.86	1.80	1.74

Fixed Cost - Captive New Projects (FY 2014-15- FY 2018-19)					
FY 2017-18	-	-	-	1.91	1.85
FY 2018-19	-	-	-	-	1.97

Table 9: Variable Cost – New captive units commissioned during FY 2014-15 to FY 2018-19

Variable Cost - Captive New Projects (FY 2014-15- FY 2018-19)	
Financial Year	Variable Cost (Rs/kWh)
FY 2014-15	1.99
FY 2015-16	2.09
FY 2016-17	2.19
FY 2017-18	2.30
FY 2018-19	2.42

Table 10: Total Tariff – New captive units commissioned during FY 2014-15 to FY 2018-19

Total Tariff – Captive New Projects (FY 2014-15- FY 2018-19)					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2014-15	3.74	3.79	3.83	3.89	3.96
FY 2015-16	-	3.90	3.94	3.99	4.06
FY 2016-17	-	-	4.05	4.10	4.17
FY 2017-18	-	-	-	4.21	4.27
FY 2018-19	-	-	-	-	4.39



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

The tariff of the captive generating plants has been determined at 85% PLF. It might be willing to supply at PLF above 85%. For such supply, only variable cost and incentive shall be paid as follows:

1. Variable cost applicable for new plants or existing plants, as the case may be.
2. Incentive @ 50 paisa per unit.

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. Other RE Source Based Generation Plants**

Schedule – II: Tariff for sale of Power by a Renewable Energy Based Generating Plant

As per “Uttar Pradesh Electricity Regulatory Commission (Captive and Renewable Energy Generation Plants) Regulations, 14” (CRE Regulations, 14)

A. Bagasse based Generation & Cogeneration Plants

i. Tariff for Existing Bagasse 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) for control period of these regulations shall be as given in Table 11, Table 12 and Table 13 respectively.

Table 11: Fixed Cost –Bagasse Existing Projects commissioned prior to FY 2005-06, FY 2005-06 to FY2008-09

Fixed Cost – Bagasse Existing Projects (Prior to FY 2005-06, FY 2005-06 to FY 2008-09)					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2005-06 or earlier	1.65	1.20	1.23	1.26	1.30
FY 2006-07	1.75	1.71	1.25	1.28	1.32
FY 2007-08	1.85	1.81	1.77	1.30	1.34
FY 2008-09	1.95	1.92	1.88	1.84	1.36

Table 12: Variable Cost –Bagasse Existing Projects commissioned prior to FY 2005-06, FY 2005-06 to FY2008-09

Variable Cost – Bagasse Existing Projects (Prior to FY 2005-06, FY 2005-06 to FY 2008-09)	
Financial Year	Variable Cost (Rs/kWh)
FY 2014-15	3.03
FY 2015-16	3.18

Variable Cost – Bagasse Existing Projects (Prior to FY 2005-06, FY 2005-06 to FY 2008-09)	
FY 2016-17	3.34
FY 2017-18	3.51
FY 2018-19	3.68

Table 13: Total Tariff –Bagasse Existing Projects commissioned prior to FY 2005-06, FY 2005-06 to FY 2008-09

Total Tariff - Bagasse Existing Projects (Prior to FY 2005-06, FY 2005-06 to FY 2008-09)					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2005-06 or earlier	4.68	4.38	4.57	4.77	4.98
FY 2006-07	4.78	4.89	4.59	4.79	5.00
FY 2007-08	4.88	4.99	5.11	4.81	5.02
FY 2008-09	4.98	5.10	5.22	5.35	5.04

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

The fixed & variable costs 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 given in Table 14, Table 15 and Table 16 respectively.

Table 14: Fixed Cost –Bagasse Existing Projects commissioned during FY 2009-10 to FY 2013-14

Fixed Cost – Bagasse Existing Projects (commissioned during FY 2009-10 to FY 2013-14)					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2009-10	2.23	2.17	2.11	2.06	2.01

Fixed Cost – Bagasse Existing Projects (commissioned during FY 2009-10 to FY 2013-14)					
FY 2010-11	2.36	2.30	2.24	2.18	2.12
FY 2011-12	2.49	2.43	2.37	2.31	2.25
FY 2012-13	2.64	2.57	2.50	2.44	2.38
FY 2013-14	2.79	2.71	2.64	2.58	2.51

Table 15: Variable Cost –Bagasse Existing Projects commissioned during FY 2009-10 to FY 2013-14

Variable Cost – Bagasse Existing Projects (commissioned during FY 2009-10 to FY 2013-14)	
Financial Year	Variable Cost (Rs/kWh)
FY 2014-15	2.86
FY 2015-16	3.00
FY 2016-17	3.15
FY 2017-18	3.31
FY 2018-19	3.48

Table 16: Total Tariff –Bagasse Existing Projects commissioned during FY 2009-10 to FY 2013-14

Total Tariff - Bagasse Existing Projects (commissioned during FY 2009-10 to FY 2013-14)					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2009-10	5.09	5.17	5.26	5.37	5.49
FY 2010-11	5.22	5.30	5.39	5.49	5.60
FY 2011-12	5.35	5.43	5.52	5.62	5.73

Total Tariff - Bagasse Existing Projects (commissioned during FY 2009-10 to FY 2013-14)					
FY 2012-13	5.50	5.57	5.65	5.75	5.86
FY 2013-14	5.65	5.71	5.79	5.89	5.99

iii. Tariff for Bagasse projects commissioned on or after 1st April 2014

The fixed and variable costs and total tariff for the new plants commissioned on or after 1st April 2014 shall be as given in Table 17, Table 18 and Table 19 respectively.

Table 17: Fixed Cost –Bagasse New Projects commissioned during FY 2014-15 to FY 2018-19

Fixed Cost - Bagasse New Projects (FY 2014-15- FY 2018-19)					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2014-15	2.81	2.75	2.70	2.64	2.59
FY 2015-16	-	2.90	2.84	2.78	2.73
FY 2016-17	-	-	2.99	2.93	2.87
FY 2017-18	-	-	-	3.07	3.01
FY 2018-19	-	-	-	-	3.16

Table 18: Variable Cost –Bagasse New Projects commissioned during FY 2014-15 to FY 2018-19

Variable Cost - Bagasse New Projects (FY 2014-15- FY 2018-19)	
Financial Year	Variable Cost (Rs/kWh)
FY 2014-15	2.86
FY 2015-16	3.00
FY 2016-17	3.15
FY 2017-18	3.31

Variable Cost - Bagasse New Projects (FY 2014-15- FY 2018-19)	
FY 2018-19	3.48

Table 19: Total Tariff –Bagasse New Projects commissioned during FY 2014-15 to FY 2018-19

Total Tariff – Bagasse New Projects (FY 2014-15- FY 2018-19)					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2014-15	5.67	5.75	5.85	5.97	6.07
FY 2015-16	-	5.90	5.99	6.09	6.21
FY 2016-17	-	-	6.14	6.24	6.35
FY 2017-18	-	-	-	6.38	6.49
FY 2018-19	-	-	-	-	6.64

Provided that in future the Commission may through a separate order direct the licensee to procure power from bagasse based generation and co-generation plants 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.

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

The bagasse based generating plants, to generate more power beyond 50% PLF alongwith the variable cost, as applicable, shall be paid incentive as below:

1. Incentive @ 50 paise per kWh

B. Biomass (rice husk based) Generation Plants

i. Tariff for Biomass (rice husk based) projects commissioned during FY 2009-10 to FY 2013-14

The fixed & variable costs 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 given in Table 20, Table 21 and Table 22 respectively.

Table 20: Fixed Cost –Biomass Existing (rice husk based) Projects commissioned during FY 2009-10 to FY 2013-14

Fixed Cost – Biomass Existing (rice husk based) Projects (commissioned during FY 2009-10 to FY 2013-14)					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2008-09	1.84	1.83	1.81	1.81	1.50
FY 2009-10	1.93	1.91	1.90	1.89	1.88
FY 2010-11	2.03	2.01	1.99	1.98	1.97
FY 2011-12	2.13	2.11	2.09	2.08	2.07
FY 2012-13	2.23	2.21	2.19	2.18	2.16
FY 2013-14	2.34	2.32	2.30	2.28	2.27

Table 21: Variable Cost –Biomass Existing (rice husk based) Projects commissioned during FY 2009-10 to FY 2013-14

Variable Cost – Biomass (rice husk based) Existing Projects (commissioned during FY 2009-10 to FY 2013-14)	
Financial Year	Variable Cost (Rs/kWh)
FY 2014-15	3.77
FY 2015-16	3.96
FY 2016-17	4.16
FY 2017-18	4.36

Variable Cost – Biomass (rice husk based) Existing Projects (commissioned during FY 2009-10 to FY 2013-14)	
FY 2018-19	4.58

Table 22: Total Tariff –Biomass Existing (rice husk based) Projects commissioned during FY 2009-10 to FY 2013-14

Total Tariff - Biomass (rice husk based) Existing Projects (commissioned during FY 2009-10 to FY 2013-14)					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2008-09	5.61	5.78	5.97	6.17	6.08
FY 2009-10	5.70	5.87	6.06	6.26	6.47
FY 2010-11	5.80	5.97	6.15	6.35	6.55
FY 2011-12	5.90	6.07	6.25	6.44	6.65
FY 2012-13	6.00	6.17	6.35	6.54	6.75
FY 2013-14	6.11	6.28	6.46	6.65	6.85

ii. Tariff for Biomass (rice husk based) projects commissioned on or after 1st April 2014

The fixed and variable costs and total tariff for the new plants commissioned on or after 1st April 2014 shall be as given in Table 23, Table 24 and Table 25 respectively.

Table 23: Fixed Cost –Biomass Existing (rice husk based) Projects commissioned during FY 2014-15 to FY 2018-19

Fixed Cost – Biomass (rice husk based) New Projects (FY 2014-15- FY 2018-19)					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2014-15	2.53	2.51	2.49	2.48	2.47
FY 2015-16	-	2.63	2.61	2.59	2.58

Fixed Cost – Biomass (rice husk based) New Projects (FY 2014-15- FY 2018-19)					
FY 2016-17	-	-	2.72	2.71	2.69
FY 2017-18	-	-	-	2.83	2.81
FY 2018-19	-	-	-	-	2.93

Table 24: Variable Cost –Biomass Existing (rice husk based) Projects commissioned during FY 2014-15 to FY 2018-19

Variable Cost – Biomass (rice husk based) New Projects (FY 2014-15- FY 2018-19)	
Financial Year	Variable Cost (Rs/kWh)
FY 2014-15	3.77
FY 2015-16	3.96
FY 2016-17	4.16
FY 2017-18	4.36
FY 2018-19	4.58

Table 25: Total Tariff –Biomass Existing (rice husk based) Projects commissioned during FY 2014-15 to FY 2018-19

Total Tariff – Biomass (rice husk based) Projects (FY 2014-15- FY 2018-19)					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2014-15	6.30	6.47	6.65	6.84	7.05
FY 2015-16	-	6.58	6.76	6.95	7.16
FY 2016-17	-	-	6.88	7.07	7.27
FY 2017-18	-	-	-	7.19	7.39
FY 2018-19	-	-	-	-	7.51

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.

iii. 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 as below in Table 26:

Table 26: Incentive to biomass (rice husk based) generating plants

Plant Load Factor	Incentive
More than 80%	50 paise/kWh

C. Municipal Solid Waste based Generation Plants

i. **Tariff for New 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 27, Table 28 and Table 29.

Table 27: Fixed Cost –Municipal Solid Waste New Projects commissioned during FY 2014-15 to FY 2018-19

Fixed Cost – Municipal Solid Waste New Projects (FY 2014-15- FY 2018-19)					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2014-15	3.58	3.53	3.47	3.42	3.37
FY 2015-16	-	3.71	3.66	3.60	3.55
FY 2016-17	-	-	3.84	3.78	3.73
FY 2017-18	-	-	-	3.97	3.91
FY 2018-19	-	-	-	-	4.12

Table 28: Variable Cost –Municipal Solid Waste New Projects commissioned during FY 2014-15 to FY 2018-19

Variable Cost - Municipal Solid Waste New Projects (FY 2014-15- FY 2018-19)	
Financial Year	Variable Cost (Rs/kWh)
FY 2014-15	2.78
FY 2015-16	2.92
FY 2016-17	3.07
FY 2017-18	3.22
FY 2018-19	3.38

Table 29: Total Tariff –Municipal Solid Waste New Projects commissioned during FY 2014-15 to FY 2018-19

Total Tariff - Municipal Solid Waste Projects (FY 2014-15- FY 2018-19)					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2014-15	6.37	6.45	6.54	6.64	6.76
FY 2015-16	-	6.64	6.72	6.82	6.93
FY 2016-17	-	-	6.91	7.01	7.11
FY 2017-18	-	-	-	7.19	7.30
FY 2018-19	-	-	-	-	7.50

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. 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 as below in Table 30:

Table 30: Incentive to Municipal Solid Waste based generating plants

Plant Load Factor	Incentive
More than 70%	50 paise/kWh

D. Small Hydro based Generation Plants

i. Tariff for Old Small Hydro projects

The effective tariff for the Old Small Hydro Power Plants shall be as given in Table 31.

Table 31: Total Tariff –Old Small Hydro Plants

Total Tariff – Old Small Hydro Projects					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2005-06 or earlier	2.36	1.39	1.43	1.46	1.49
FY 2006-07	2.54	2.46	1.47	1.50	1.54
FY 2007-08	2.73	2.65	2.56	1.55	1.58
FY 2008-09	2.93	2.84	2.76	2.68	1.63

ii. Tariff for New 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 32 and Table 33.

Table 32: Total Tariff –New Small Hydro Projects upto 5 MW (FY 2014-15 to FY 2018-19)

Total Tariff – New Small Hydro Projects upto 5 MW (FY 2014-15- FY 2018-19)					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2014-15	5.65	5.52	5.39	5.26	5.14
FY 2015-16	-	5.84	5.71	5.58	5.45
FY 2016-17	-	-	6.06	5.89	5.73
FY 2017-18	-	-	-	6.25	6.11
FY 2018-19	-	-	-	-	6.47

Table 33: Total Tariff –New Small Hydro Projects greater than 5 MW and upto 25 MW (FY 2014-15 to FY 2018-19)

Total Tariff – New Small Hydro Projects Greater than 5 MW and upto 25 MW (FY 2014-15- FY 2018-19)					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2014-15	4.98	4.85	4.72	4.59	4.47
FY 2015-16	-	5.15	5.01	4.88	4.75
FY 2016-17	-	-	5.32	5.18	5.05
FY 2017-18	-	-	-	5.50	5.36
FY 2018-19	-	-	-	-	5.68

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 34:

Table 34: Incentive to small hydro based generating plants

Capacity	Plant Load Factor	Incentive
Existing Projects		
Any Capacity	PLF above 35%	50 paise/kWh
New Projects		
Upto 5 MW	PLF above 30%	50 paise/kWh
5 MW to 25 MW	PLF above 35%	50 paise/kWh

E. Solar based Generation Plants

Tariff for New Solar Grid Connected PV projects

The effective tariff for the New Solar Grid Connected PV Plants shall be as given in Table 35.

Table 35: Total Tariff – New Solar Grid Connected PV Projects

Total Tariff – New Solar Grid Connected PV Projects	
Year of Commissioning	Levelized Tariff for 25 Years
FY 2014-15	7.06

Provided for subsequent years the Commission shall come up with a tariff by determining the capital cost for that year through a separate order.

Provided that 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.

F. Any other RE source based generation

i. Tariff for existing plants for any other RE source based generation plants

The effective tariff for existing generating stations based on any other RE source based generation shall be as given in Table 36.

Table 36: Total Tariff – Existing Plants any other RE source based projects

Total Tariff – Existing Plants any other RE source based Projects					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2014-15	3.84	4.08	4.34	4.62	4.91

ii. Tariff for new plants for any other RE source based generation plants

The effective tariff for new generating stations based on any other RE source based generation shall be as given in Table 37.

Table 37: Total Tariff –New Plants any other RE source based projects

Total Tariff – New Plants any other RE source based Projects					
Year of Commissioning	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
FY 2014-15	4.26	4.54	4.82	5.13	5.46

Provided that 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 may be determined by the Commission on case to case basis on receipt of an application for this purpose.

Determination of Project specific Tariff for generation of electricity from such renewable energy sources shall be in accordance with such terms and conditions as stipulated under relevant Orders of the Commission.



Provided that the financial norms as specified under Chapter-2 of the CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2012, except for capital cost, shall be ceiling norms while determining the project specific tariff.

Provided further that the return on equity shall be limited to 16% as in case of other renewable technologies.