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**WEST BENGAL ELECTRICITY REGULATORY COMMISSION**

***NOTIFICATION***

**No.39/WBERC**

**Dated 25.03.2008**

In exercise of the powers conferred by sub-section (1) and clause (zp) of sub-section (2) of section 181 read with clause (e) of sub-section (1) of section 86 of the Electricity Act, 2003 (36 of 2003) and all powers enabling it on that behalf and in supersession of notification No.28/WBERC dated 4th May, 2006 published in the Kolkata Gazette, Extraordinary on 4th May, 2006, the West Bengal Electricity Regulatory Commission hereby makes the following regulations:-

**1.0 Short title, extent and commencement.**

- i) These regulations may be called the West Bengal Electricity Regulatory Commission (Cogeneration and Generation of Electricity from Renewable Sources of Energy) Regulations, 2008.
- ii) They extend to the whole of the West Bengal.
- iii) They shall come into force on the date of their publication in the Official Gazette.

**2.0 Definitions**

2.1 In these regulations, unless the context otherwise requires,—

- (a) 'ABT' means Availability Based Tariff as defined in the Tariff Regulations;
- (b) The 'Act' means the Electricity Act, 2003;
- (c) 'ALDC' means Area Load Despatch Centre as defined in the State Grid Code;
- (d) 'Bio-gas plant' means a power plant generating electricity through anaerobic digestion of wet biomass into fuel;
- (e) 'Commission' means the West Bengal Electricity Regulatory Commission;
- (f) 'DPL' means the Durgapur Projects Limited;
- (g) 'DVC' means the Damodar Valley Corporation established by the Damodar Valley Corporations Act, 1948;
- (h) 'KV' means Kilo Volt;
- (i) 'KVARh' means reactive energy in Kilo Volt Ampere hour;

- (j) 'kWh' means active energy in kilo Watt hour;
- (k) 'Licensee' means a person who has been granted a licence under section 14 of the Act for distribution of electricity and includes a deemed licensee for supply of electricity under first and fourth provisos to section 14 of the Act;
- (l) 'MNRE' means Ministry of New and Renewable Energy of the Government of India;
- (m) 'MOU' means the Memorandum of Understanding entered into between the seller / developer and the licensee;
- (n) 'MSW power plant' means the power plant that generates electricity by utilizing municipal solid waste as fuel for generation of electricity;
- (o) 'MW' means Mega Watt;
- (p) 'Nodal Agency' means SLDC or ALDC of respective licensees;
- (q) 'Open Access Regulations' means the regulations as defined in the Tariff Regulations;
- (r) 'PPA' means the Power Purchase Agreement between two agencies for purchase / sale of power;
- (s) 'Renewable source' means renewable electricity generating sources such as small / mini / micro hydel project up to 25 MW capacity, wind, solar, biomass based on 100% producer gas on combustion route, urban / municipal waste, industrial waste, geothermal, tidal, ocean thermal energy conversion (OTEC) or other such sources as approved by the MNRE;
- (t) 'SLDC' means the State Load Despatch Centre;
- (u) 'Solar PV power plant' means the Solar Photo Voltaic Power plant that uses sunlight for direct conversion into electricity through Photo Voltaic technology;
- (v) 'STU' means State Transmission Utility;
- (w) 'State' means the State of West Bengal;
- (x) 'Tariff Regulations' means the regulations made by the Commission under section 61 of the Act;
- (y) 'TOD' means the Time-of-the-Day;
- (z) 'Transmission licensee' means a person who has been granted a licence under section 14 of the Act for transmission of electricity and includes a deemed licensee for transmission of electricity under first proviso to section 14 of the Act;
- (za) 'UI' means Un-scheduled Interchange;
- (zb) 'WBERC' means the West Bengal Electricity Regulatory Commission;
- (zc) 'WBREDA' means the West Bengal Renewable Energy Development Agency;
- (zd) 'WBSUEDCL' means the West Bengal State Electricity Distribution Company Ltd.

2.2 Words and expressions used and not defined in these regulations but defined in the Act shall have the meanings respectively assigned to them in the Act.

### 3.0 Quantum of Purchase of Electricity from Cogeneration and Renewable Sources of Energy.

3.1 Minimum quantum of electricity to be purchased by the licensees from cogeneration and renewable sources expressed as percentage of their total consumption of electricity in a year in the respective area of supply of the licensees during the years 2008-09 to 2011-12 shall be such as shown in the table below.

Year	Licensees				
	WBSUEDCL	CESC Ltd.	DPL	DPSC Ltd.	DVC
2008-09	4.8	4.0	2.5	2.0	2.0
2009-10	6.8	6.0	4.0	4.0	4.0
2010-11	8.3	8.0	7.0	7.0	7.0
2011-12	10.0	10.0	10.0	10.0	10.0

For subsequent years the Commission may separately specify the purchase obligations for the licensees as the Commission deems fit.

- 3.2 Purchase obligations for the licensees as specified above are mandatory minimum percentage of purchase to be maintained by the licensees. The licensees shall have the option to purchase higher percentage with the prior approval of the Commission.
- 3.3 The buyer licensee shall indicate the proposed quantum of purchase of energy from cogeneration and renewable sources for each ensuing year of the control period in the application for determination of tariff duly indicating the sources of purchase.
- 3.4 The buyer licensee shall source the proposed quantum of electricity from cogeneration and renewable sources within the State. The drawal point at which the licensee shall purchase energy from cogeneration and renewable energy sources shall be the point of measurement for computing fulfillment of purchase obligation.
- 3.5 For the purpose of counter checking and monitoring of the fulfillment of purchase obligation of each licensee, the energy from cogeneration and renewable sources, purchased by the licensee, shall be considered for the average of last financial year as submitted in the application for determination of tariff for the ensuing years of the control period concerned and assessed on pro rata basis from annual energy purchase obligation specified in these regulations.
- 3.6 Energy from cogeneration and renewable sources generated within the State and used for captive purposes within the State shall be taken into account for computing the fulfillment of purchase obligation of the licensee in whose licensed area such captive use of energy from cogeneration or renewable sources is made provided the licensee submits the necessary details of such use to the Commission each year. In case of captive use through open access, the quantum of energy wheeled through the system of any licensee(s) against such open access shall also be taken into account as the fulfillment of purchase obligation for that licensee(s).
- 3.7 While contracting power purchase from cogeneration or renewable sources, the priority for purchase shall be on the basis of the comparative price of energy from cogeneration and other renewable sources only after the minimum obligation for purchase of energy from cogeneration and renewable sources as specified in regulation 3.1 above is achieved for each year.

#### 4.0 **Determination of Tariff of Electricity from Cogeneration and Renewable Source.**

- 4.1 Tariff for purchase of electricity from cogeneration and renewable sources shall be agreed mutually by the licensees and the suppliers at a level not above the price cap specified by the Commission in these regulations.
- 4.2 To facilitate examination of reasonableness of price at which a licensee shall procure energy from cogeneration and renewable sources, the prospective purchaser may require the seller to submit all cost data and financial charges to the purchaser. MOU / PPA as agreed between the seller and the purchaser shall be submitted to the Commission. The Commission at this stage does not debar a licensee from agreeing to a negotiated price within the capped price. However, competitive price within the capped level will be a preferred alternative. The Commission may accept the same for the present if the PPA is made as per these regulations. PPA, if any, entered into between the seller / developer and purchaser before the Act came into force, shall remain valid so far it is not inconsistent with the provisions of these regulations. However, the licensee shall not decline to purchase energy from such sources within the specified capped price until the minimum purchase obligation is achieved each year provided that connectivity and all other conditions are consistent with these regulations.

#### 5.0 **Price Capping for Energy from Cogeneration and various Renewable Sources.**

##### 5.1 **(i) Bio-mass –**

The price at which the renewable energy from biomass source can be sold to a licensee is capped at Rs.4.00 per kWh and shall remain fixed for three years from the date of coming into force of these regulations with escalation @ 2.5% each year from 2011-12 onwards. The Commission may re-fix the capped price and validity period along with the rate of escalation *suo moto* in consideration of information from market sources or on the basis of any petition filed in this regard. Fuel for power generation from bio-mass source shall be generally rice husk or bio-mass made available by additional energy plantation undertaken by the owner of bio-mass plant. A maximum fuel mix of 15% conventional fossil fuel shall be allowed on yearly basis.

##### **(ii) Wind –**

For wind energy, the price cap shall be at Rs.4.00 per kWh for five years from the date of coming into force of these regulations.

**(iii) Small Hydro -**

For energy from small hydel projects, the price cap is fixed at Rs.3.60 per kWh for five years from the date of commissioning.

**(iv) Cogeneration -**

For energy from cogeneration, the price cap shall be Rs.2.55 per kWh and the same shall remain in force for five years from the date of coming into force of these regulations.

**5.2 Solar PV –**

(a) Eligible grid connected Solar PV power plant of capacity ranging from 1.0 MW (peak) to 5.0 MW (peak), if set up in the licensed area of supply of a licensee, shall avail the generation based incentive sanctioned under letter No. 32/61/2007-08/PVSE dated 24.1.2008 of the Ministry of New and Renewable Energy, Govt. of India, and the solar energy generated by such grid connected solar PV projects shall be sold to the connected licensees at a tariff not exceeding the highest capped price allowed by the Commission for that year for the purchase of energy by a licensee from among the various categories of renewable sources (other than any solar PV source) as specified in these regulations subject to other terms and conditions contained in the guidelines for generation based incentive of MNRE mentioned above till such date the aforesaid incentive of MNRE continues. On withdrawal of the aforesaid incentive by MNRE for reasons not attributable to the grid connected Solar PV plant authorities, the capped price for sale of such energy to the licensee shall be reviewed by the Commission on application to the Commission for such solar PV projects only which are commissioned upto 2011-12. The capped price of energy for grid connected solar PV plants (including those plants which are availing accelerated depreciation benefit under section 32 of the Income-tax Act, 1961) which are not eligible for aforesaid incentive declared by MNRE, shall be Rs.11.00 / kWh for sale to the distribution licensees and such tariff will be applicable for the grid connected solar PV projects commissioned upto 2009-10 and shall remain valid for ten years from the date of coming into force of these regulations. The capped price of energy for grid connected solar PV plants (including those plants which are availing accelerated depreciation benefit under section 32 of Income-tax Act, 1961) which are not eligible for aforesaid incentive declared by MNRE and commissioned after 2009-10 but on or before 31st March, 2012 shall be Rs.10/ kWh which shall remain valid for ten years from the date of coming into force of these regulations. If at any stage in future such a Solar PV Plant which was ineligible to avail the aforesaid generation based incentive becomes eligible for incentive declared by MNRE or by State or Central Government, the Commission may review the rate of Rs.11.00/ Kwh or Rs.10.00/ kWh, as the case may be, for sale to the licensees and fix a new rate duly taking into consideration the allowable incentive to such Solar PV plants. Any incentive received by the licensee from MNRE on this account shall be passed on to their purchasers of electricity. The Commission will take a fresh view on the price cap for grid connected Solar PV projects commissioned from 2012-13 onwards. The total purchase of energy of a licensee from grid connected Solar PV source in a financial year shall be limited in such a manner that the impact of purchase of such energy on the average cost of supply of the licensee as determined by the Commission in the respective tariff order of the year is less than 1 Paise / kWh in a year. Each proposal for addition of grid connected Solar PV power plant to the licensee's system will be examined and monitored by the licensee itself and the Commission is to be informed by the licensee about the aforesaid impact of cumulative capacity of solar PV projects in its licensed area on the average cost of supply of the licensee on the basis of actual data of a full financial year before finalizing any PPA or MOU with the developer of such solar PV power plant in the aforesaid area of supply of the licensee.

(b) Roof-top Solar PV sources of capacity ranging from 2 KW (peak) to 100 KW (peak) if installed for injecting into the distribution system of a licensee only by such institutional consumer(s) like Government hospitals and health centres, Government and Government aided schools and academic institutions, Government offices and organizations, any housing complex already promoted for this purpose by Government or any Government agency for the development of renewable sources, local bodies like municipalities, panchayats and cooperative societies of consumers located in the same premises, such injection from roof-top solar PV sources of the above mentioned consumer(s) shall not be more than 90% of the consumption from the licensee's supply by the above mentioned consumer(s) in a financial year. Such injection from roof-top solar PV sources of the above mentioned consumer(s) shall be settled on net energy basis at the end of each financial year. Any excess energy injected by the above mentioned consumer(s) from the roof-top solar PV sources being more than the 90% of the consumption of energy by that consumer(s) from the licensee's supply in each billing period shall be carried over to the next billing period within that financial year. Slab tariff, as per tariff order, shall be applicable for the net energy supplied by the licensee in a billing period if the supplied energy by the licensee is more than the injected energy by the roof-top solar PV sources of the consumer(s) after taking into account the quantum of energy, if any, carried forward from earlier billing period(s) of that financial year. If in a billing period the supplied energy by the licensee is less than or equal to energy injected by the roof-top solar PV sources of the consumer(s) after adding the cumulative carried

over injected energy from previous billing period(s) of that financial year the billed amount for energy will be nil for that billing period(s). At the end of the financial year, if the total energy supplied by the licensee to the consumer(s) for that financial year is found to be less than the energy injected by the roof-top solar PV sources of that consumer(s) for that financial year, the licensee shall not pay any charge to the consumer(s) for that net energy, injected by the consumer(s), in excess of 90% of consumption of that consumer(s) from the licensee's supply in that financial year and the same shall be treated as unwanted/inadvertant injunction. At the beginning of each financial year, cumulative carried over injected energy will be reset to zero. Payment in a billing period by the consumer(s) (owning roof-top solar PV sources) to the licensee shall be guided by the provisions of the regulations made by the Commission under section 50 of the Act. For each billing period in a financial year the licensee shall show the quantum of injected energy from roof-top Solar PV sources in the billing period, supplied energy from it source in the billing period, net billed energy for payment by the consumer(s) for that billing period and net carried over energy to the next billing period separately. Any delay in payment shall attract surcharge at the agreed rate. The MOU/PPA to be signed between the licensee and developer of roof-top Solar PV sources shall include necessary terms & conditions of meter reading, billing, payment, payment of security arrangements, rate of delayed payment surcharge etc.

### 5.3 MSW & Bio-gas Plants

#### (i) MSW

The price at which the renewable energy from Municipal Solid Waste can be sold to a licensee is capped at Rs.4.50/kWh and shall remain fixed for a period of five years from the date of coming into force of these regulations. Fuel for power generation from Municipal Solid Waste shall be generally from the garbage supplied by a municipality free of cost. A maximum fuel mix of 15% conventional fossil fuel shall be allowed on yearly basis.

#### (ii) Bio-gas

Electricity generated from Bio-gas Plant can be sold to the licensee at a capped price of Rs. 5 / kWh and shall remain fixed for a period of five years from the date of coming into force of these regulations.

5.4 All price caps as specified in these regulations shall include all applicable taxes and cost of connectivity through suitably connected line upto the nearest grid point.

5.5 The Commission may, at any time, review the period of capped price, mentioned in these regulations, if necessary.

### 6.0 Connectivity:

6.1 The cogeneration and renewable energy sources excepting roof-top Solar PV and bio-gas sources shall be connected to the State Grid at a voltage level of 33 KV or 11 KV / 6 KV subject to technical suitability determined by the licensee. If any dispute arises about the technical suitability of connection of such sources with the grid, the matter shall be referred to the Commission whose decision in this regard shall be treated as final. The delivery point shall be the nearest grid sub-station having 33 KV / 11 KV / 6 KV voltage level. Synchronization point shall, however, remain at the power station end with all protection and inter-lock as agreed between the licensees, STU and developers. Such connectivity shall also be provided for use of licensee's system under Open Access. More than one such projects located near each other are to be clustered together as far as possible in order to avail connectivity with the grid sub-station.

6.2 Roof-top Solar PV sources of capacity as mentioned in regulation 5.2 (b) shall be allowed connectivity at LV or MV or 6 KV or 11 KV of the distribution system of the licensee as considered technically suitable by the licensee. Supply of electricity to the consumer(s) from the licensee's sources and that to the licensee's distribution system from the roof-top Solar PV sources shall be measured either by two separate meters, the readings of which shall be used in each billing period for settlement on net basis as specified in regulation 5.2(b) or alternatively by an export-import type meter suitable for directly measuring the net exchange. The meter for measuring the energy injected from Solar PV sources shall be provided by the licensee against applicable meter rent along with the connection of the meter upto the nearest technically suitable point in the distribution system of the licensee. The connectivity from the roof-top Solar PV sources upto the meter shall be at the cost and responsibility of the consumer(s) and shall be in accordance with the guidance of the licensee so that the licensee's distribution system is not affected by any fault in the system owned by the consumer(s).

6.3 Bio-gas Plants, if connected to the distribution system, shall be connected at 415 V, 3 phase or at 6 KV or 11 KV level of the licensee according to the technical suitability examined by the licensee.

6.4 Communication system between grid sub-station and generating station shall be developed by the developer/ developers at its / their cost. Protection schemes shall be examined by the licensee to suit the requirements. Developers of cogeneration and renewable energy sources shall abide by all applicable codes, rules, regulations *etc.* in regard to operational and commercial practices.

- 6.5 Wherever cogeneration and renewable energy sources have already been connected to the State Grid at a voltage level lower than the level specified and wherever such State Grid connection causes any bottleneck in capacity addition or causes avoidable discontinuance of generation or low voltage during peak hours or frequent outage of line or insufficient redundancy, such grid connection shall be converted to suitable voltage level preferably with double circuit line and cost for such conversion shall be borne by the developer.
- 7.0 Open Access for Cogeneration and Renewable Sources of Energy.**
- 7.1 Any person generating electricity from cogeneration or renewable sources shall have open access, subject to availability of adequate transmission facility to any transmission licensee's system within the State on payment of various charges as specified.
- 8.0 Charges for Open Access.**
- 8.1.1 All open access charges shall be payable as per Open Access Regulations and Tariff Regulations except meter rent, meter reading and other related charges.
- 8.1.2 Meter rent and meter reading and other related charges shall be paid by the open access customer at the rate of 0.75 paise / unit of monthly energy reading per month subject to a minimum of Rs. 500/- and maximum of Rs. 2,000/- per month and shall be paid to the licensee who is rendering such service.
- 8.2 Transmission Charges:**
- 8.2.1 Transmission charges payable for open access availed by cogeneration and renewable energy sources shall be two-third of the rate of such charges applicable for open access customers for long term and short term open access as determined in relevant tariff order.
- 8.3 Wheeling Charges:**
- 8.3.1 Wheeling charges applicable for use of distribution system or associated facilities of a licensee by open access customers for conveyance of electricity from cogeneration and renewable energy sources shall be either one-third of the wheeling charges calculated as per tariff order under Tariff Regulations or 7.5% of the energy fed to the grid irrespective of the distance of wheeling, whichever is higher.
- 8.4 Reactive Energy Charges:**
- 8.4.1 Reactive energy charges will be payable as per Open Access Regulations for all co-generation and renewable sources of power generation except for wind power generation. For wind power the rate will be 20 Paise / KVARh in place of the specified charges for reactive energy in Open Access Regulations.
- 8.5 Other charges for Open Access:**
- 8.5.1 All other charges for open access shall be in terms of Open Access Regulations.
- 8.6 Un-scheduled / Mismatch Charges in Drawal / Injecting:**
- 8.6.1 Un-scheduled/mismatch charges in drawal/injecting energy shall be mutually decided and agreed either on ABT basis or on TOD basis. A 24 hour day ahead schedule shall be submitted by the open access customer/generator to the Nodal Agency on mutually agreed time block. Un-scheduled/mismatch charges for deviation from the schedule shall be paid weekly as per rate as specified in the Tariff Regulations. The modalities regarding billing and payment mechanism shall be in accordance with the Tariff Regulations. Wind power generation, grid connected solar PV sources and roof-top solar PV sources shall be excluded for unscheduled interchange payment.
- 9.0 Procedure to be followed for Cogeneration and Renewable Energy Sources:**
- 9.1 After preliminary discussions with the buyer licensee, the developer shall submit full details of the projects along with cost data and financial charges and tariff for direct sale to the licensee.
- 9.2 The buyer licensee shall examine the tariff proposal in the light of price reasonableness, impact on consumer tariff and the price cap specified in these regulations.
- 9.3 MOU / PPA shall be signed between developer and purchaser. In case of open access, the transmission and/or wheeling agency shall also be a party to the MOU / PPA. In the MOU / PPA with details of connectivity, completion of project and commencement of supply, periods of supply (month wise), time of supply (peak / off peak), technical & commercial obligation, security and modes of payment of each party, etc. in line with these regulations shall be suitably incorporated. The MOU / PPA, as agreed and signed, shall be submitted to the Commission.

**10.0 Power to Amend:**

The Commission may from time to time add, vary, alter, modify or amend any provisions of these regulations.

**11.0 Power to Remove Difficulties:**

The Commission may *suo moto* or on an application from any person generating electricity from cogeneration and renewable sources or a buyer licensee, review these regulations and pass appropriate orders to remove any difficulty in implementing the provisions of these regulations.

**12.0 Repeal:**

12.1 The West Bengal Electricity Regulatory Commission (Cogeneration & generation of electricity from Renewable Sources of energy) Regulations, 2006 issued under Notification No.28/WBERC dated 4.5.2006 and published in the Kolkata Gazette Extraordinary Part I dated 4.5.2006 are hereby repealed.

12.2 Notwithstanding such repeal, anything done or any action already taken under the repealed regulations, shall in so far as it is not inconsistent with the West Bengal Electricity Regulatory Commission (Cogeneration & Generation of Electricity from Renewable Sources of Energy) Regulations, 2008, be deemed to have been done or taken under the corresponding provisions of the West Bengal Electricity Regulatory Commission (Cogeneration & Generation of Electricity from Renewable Sources of Energy) Regulations, 2008.

By order of the Commission,

Place: Kolkata

Date: 25.03.2008

C. R. BHAUMIK,  
*Secretary of the Commission.*