

**The**  
  
**Kolkata Gazette**  
सत्यमेव जयते  
*Extraordinary*  
Published by Authority

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FRIDAY, MARCH 22, 2013

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PART I—Orders and Notifications by the Governor of West Bengal, the High Court, Government Treasury, etc.

**WEST BENGAL ELECTRICITY REGULATORY COMMISSION**

**NOTIFICATION**

No. 50/WBERC

Kolkata, the 22nd March, 2013.

In exercise of the powers conferred by sub-section (1) and clause (zp) of sub-section (2) of section 181, sections 61 and 66 read with clause (e) of sub-section (1) of section 86 of the Electricity Act, 2003 and all powers enabling it on that behalf and in supersession of Notification No. 47/WBERC dated 10.08.2010 published in the Kolkata Gazette, Extraordinary dated 10.08.2010 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, 2013.
- ii) They extend to the whole of 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:

- i) 'ABT' means Availability Based Tariff as defined in the Tariff Regulations;
- ii) 'Act' means the Electricity Act, 2003;
- iii) 'ALDC' means Area Load Despatch Centre as defined in the State Grid Code;

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- iv) 'Bio-gas plant' means a 'power plant' generating electricity by using fuel produced through anaerobic digestion of wet bio-mass;
  - v) 'Bio-mass' means waste produced during agricultural and forestry operations (for example straws and stalks) or produced as a by-product of processing operations of agricultural produce (e.g., husks, shells, deoiled cakes, etc.), wood produced in dedicated energy plantations or recovered from wild bushes/ weeds and the wood waste produced in some industrial operations;
  - vi) 'Central Agency' means the agency as defined in CERC REC Regulation;
  - vii) 'CERC' means the Central Electricity Regulatory Commission;
  - viii) 'CERC REC Regulation' means Central Electricity Regulatory Commission (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010 or any subsequent replacement of it;
  - ix) 'Commission' means the West Bengal Electricity Regulatory Commission referred to in sub-section(1) of section 82 of the Act;
  - x) 'DPL' means the Durgapur Projects Limited;
  - xi) 'DVC' means the Damodar Valley Corporation established by the Damodar Valley Corporations Act, 1948;
  - xii) 'KV' means Kilo Volt;
  - xiii) 'KVARh' means reactive energy in Kilo Volt Ampere hour;
  - xiv) 'kWh' means active energy in Kilo Watt hour;
  - xv) '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, fourth and fifth provisos to section 14 of the Act under the jurisdiction of the Commission;
  - xvi) 'MNRE' means Ministry of New and Renewable Energy of the Government of India;
  - xvii) 'MOU' means the Memorandum of Understanding entered into between the seller and the licensee;
  - xviii) 'MSW power plant' means the power plant that generates electricity by utilizing municipal solid waste as fuel for generation of electricity;
  - xix) 'MW' means Mega Watt;
  - xx) 'Nodal Agency' means SLDC or ALDC related to respective licensees;
  - xxi) 'Open Access Regulations' means the regulations as defined in the Tariff Regulations;
  - xxii) 'PPA' means the Power Purchase Agreement between two agencies for purchase / sale of power;
  - xxiii) 'Renewable source' means renewable electricity generating sources such as small hydro generating station, wind, solar, bio-mass 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;

- xxiv) 'REC' means Renewable Energy Certificate as specified in CERC REC Regulation;
- xxv) 'Renewable Purchase Obligation' or 'RPO' means the obligation of purchase of electricity from renewable and cogeneration sources by a distribution licensee in pursuance to section 86 (1) (e) of the Act which is detailed out in regulations 3.1 to 3.9 of these regulations;
- xxvi) 'Small hydro Generating Station' means a hydro generating station having capacity of not more than 25 MW and consisting of such units whose turbo generator is under the same turbine floor;
- xxvii) 'SLDC' means the State Load Despatch Centre;
- xxviii) 'Solar PV power plant' means the Solar Photo Voltaic power plant that uses sunlight for direct conversion into electricity through Photo Voltaic technology;
- xxix) 'STU' means State Transmission Utility;
- xxx) 'Start-up power' means the same as defined in Open Access Regulations;
- xxxi) 'State' means the State of West Bengal;
- xxxii) 'State Agency' means the agency in the State of West Bengal as may be designated by the Commission to act as the agency for accreditation and recommending the renewable energy projects for registration and to undertake such function as may be specified by the Commission;
- xxxiii) 'Tariff Regulations' means the regulations made by the Commission under section 61 of the Act;
- xxxiv) 'TOD' means the Time-of-the-Day;
- xxxv) '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 fourth and fifth provisos to section 14 of the Act;
- xxxvi) 'UI' means Unscheduled Interchange as explained in Tariff Regulations;
- xxxvii) 'Ultimate Target' means the RPO target of 10% of the total consumption of electricity in the area of supply, of licensee(s) or some higher percentage of the total consumption as may be fixed by the Commission to be met by the licensee(s).
- xxxviii) 'WBERC' means the West Bengal Electricity Regulatory Commission;
- xxxix) 'WBREDA' means the West Bengal Renewable Energy Development Agency;
  - xl) 'WBSEDCL' means the West Bengal State Electricity Distribution Company Ltd.;
  - xli) 'Year' means financial year.

2.2 Words and expressions used and not defined in these regulations but defined in the Act or any other regulations issued by the Commission, shall have the same meaning assigned to them respectively in the Act, or such other regulations issued by the Commission.

### 3.0 **Renewable & Cogeneration Purchase Obligation (RPO) Target:**

3.1 All efforts shall be made to meet the targets in the table below by purchase of electricity and/or generation of electricity by the distribution licensees from cogeneration and / or renewable sources, expressed as percentage of their total consumption of electricity in the area of supply of the distribution licensee in a year during the years 2013-2014 to 2017-2018.

| year    | Minimum quantum of purchase (in %) of total consumption from Cogeneration and Renewable energy sources |                       |
|---------|--|-----------------------|
|         | Solar  | Total including Solar |
| 2013-14 | 0.10   | 4.0                   |
| 2014-15 | 0.15   | 4.5                   |
| 2015-16 | 0.20   | 5.0                   |
| 2016-17 | 0.25   | 5.5                   |
| 2017-18 | 0.30   | 6.0                   |

Such target obligation indicated hereinbefore in the above table shall be considered on the basis of summated energy available as detailed in regulation 3.4 of these regulations.

3.2 The quantum of obligation is with regard to the energy input in the system of the licensee(s) after adjustment of losses. For subsequent years (from 2018 - 2019 onwards) the increase shall be 1% each year till the Ultimate Target is reached by the distribution licensee(s). Till the Ultimate Target is reached, the distribution licensee shall prefer long term agreement with the supplier of renewable and/or cogeneration sources if supplier agrees. From 2018-19 onwards the annual target of solar RPO will be increased by 0.1% till it reaches 0.5%.

3.3 Obligations for the licensees as specified in regulation 3.1 of these regulations are minimum percentages of purchase which is endeavoured to be maintained by the licensees. The licensees shall have the option to purchase, in excess of target till Ultimate Target is reached.

Provided that such procurement shall not go beyond 5% of the total consumption in the area of the supply of the distribution licensee.

Provided further that for purchase of solar energy beyond the target of any year shall not exceed 0.25% of the total consumption in the area of supply of the distribution licensee for that year or target of solar RPO for that year whichever is higher.

3.4 Every distribution licensee shall endeavour to meet its RPO target by any one or any combination of the following ways:

- i. own generation by licensee from renewable or cogeneration sources.
- ii. by purchase from any renewable and/ or cogeneration sources including other distribution licensee as detailed in regulation 3.7 of these regulations.
- iii. by way of purchasing renewable energy from any renewable sources in the area of supply of the licensee under REC mechanism at a price not exceeding the Pooled Cost of Purchase of such distribution licensee in line with regulation 3.6 of these regulations.
- iv. purchasing renewable and/or cogeneration energy from any generator through open access at a mutually agreed price or through power exchange at market determined price but within the capping price as mentioned in regulation 6.0
- v. by considering the energy used or consumed from cogeneration and /or renewable sources as per regulation 3.10 of these regulations.
- vi. The amount of solar energy purchased as a part of bundled power under JNNSM.
- vii. Purchase of renewable and/or cogeneration energy from anywhere outside the State under Tariff Regulations but within the capping price under these regulations and as per definition of renewable and/or cogeneration sources under these regulations.

Provided that consumption / procurement of renewable and/or cogeneration power from own generation or from other sources at the price above the capping price, fixed by the Commission where applicable shall not be considered as eligible quantum for fulfilment of RPO. For this purpose the purchase price at the metering point will be considered for eligibility determination on the basis of capping price as per regulation 6.0 of these regulations.

- 3.5 To meet the RPO the licensee shall make advertisement in at least two widely published national English daily newspapers and at least one widely published Bengali daily newspaper every year. The first such advertisement shall be made within six months from the date of effect of these regulations.
- 3.6 Notwithstanding anything contained contrary to any other regulations of this Commission, energy, purchased at Pooled Cost of Purchase which means the weighted average pooled price at which the distribution licensee has purchased the electricity including cost of self generation, if any, in the previous year from all the energy suppliers long-term and short-term, but excluding those based on renewable energy sources, as the case may be as explained in CERC REC Regulation, shall be considered as valid procurement to meet RPO and in such case the capping price under regulation 6.0 of these regulations will not become applicable.
- 3.7 Notwithstanding anything contained contrary to any other regulations, energy purchased by any distribution licensee from another distribution licensee within the state at a purchase price approved by the Commission in the tariff order of the purchasing distribution licensee where part of such purchase is considered as purchased as renewable and/or cogeneration energy as agreed by both the parties in the concerned PPA, then such part of the energy procured will be considered for RPO determination and in such case the capping price under regulation 6.0 of these regulations will not become applicable.
- 3.8 The distribution licensee shall submit the summary statement of compliances against RPO to the State Agency on annual basis within the month of October of the succeeding year.
- 3.9 The metering point at which a licensee shall purchase energy from cogeneration and / or renewable sources shall be the delivery point as per regulation 7.0 of these regulations.
- 3.10 The energy drawal by any open access customer in the area of distribution licensee through purchase of such energy from any renewable and/or cogeneration source shall also be considered for meeting the RPO of the distribution licensee. The renewable and/or cogeneration energy which is being considered as a part of distribution loss during wheeling through the distribution network of any licensee at injection end or drawal end of open access or as intervening network and for which in the wheeling agreement of open access such loss is accounted in kind or price then such amount of energy against distribution loss shall also be considered while calculating the RPO of the distribution licensee. The transmission loss for transmission of renewable and/or cogeneration energy through the asset of transmission licensee(s) in West Bengal will also be accounted for RPO of the licensee under whose area and through whose network the energy is drawn by the user of such energy.
- 3.11 While contracting power purchase from cogeneration and / or renewable sources, the priority for purchase shall be on the basis of the comparative price of energy and availability from cogeneration and /or other renewable sources in a transparent manner through negotiation within the capped price specified under regulation 6.1 of these regulations until Ultimate Target of the licensee is being achieved. Thereafter, the licensee shall procure such power through competitive bidding within the capped price specified under regulation 6.1 of these regulations except hydro

power stations if tariff of such power stations are determined by regulatory mechanism as provided in Tariff Regulations. For this purpose open competitive bidding should be done every year through wide publicity including advertisements in the newspapers subject to the condition that such price will be within the capping price of these regulations. However, where competitive bidding route is used according to guidelines issued by the Central Government in pursuance of section 63 of the Act, the price will be as per the competitive bidding guidelines and in that case capping price as per these regulations will not be applicable.

3.12 A licensee shall keep the Commission informed about its status against purchase target as mentioned in regulation 3.1 of these regulations by October of every year for the previous year indicating the quantum of energy procured and its sources along with reasons, if any, for non-achievement of purchase target.

3.13 Even after taking adequate measures by the licensee to procure energy from renewable and/or cogeneration sources as per regulation 3.5 of these regulations, if the total quantum available for any year does not fulfill the target RPO for the year, then the licensee can procure conventional power to meet the demand. However subsequently if such renewable and/or cogeneration energy is available then it can be procured up to the level of the Ultimate Target but not higher than 5% of the amount of projected consumption in the area of the distribution licensee and subject to the further condition that due to such procurement of renewable and/or cogeneration energy the average cost of supply to the consumer as determined under Tariff Regulations shall not be increased by more than 2 paise/kWh.

#### 4.0 **Consequence of Non-compliance of Renewable & Cogeneration Purchase Obligation:**

In case of non-fulfilment of RPO, Commission may suo-motu or on the basis of any application initiate proceedings under section 142 of the Act if any of the followings is established:

- i) Licensee has not complied with regulation 3.5.
- ii) Licensee has not complied with regulation 3.6 where RPO commitment has yet to be fulfilled.

4.1 The licensee shall not be held liable for not meeting the RPO in spite of taking all the following actions:

- i. In case of non-availability of renewable and cogeneration energy in response to advertisement as per regulation 3.5 within the capping price.
- ii. In case of non-availability of REC energy within the capping price through power exchange the licensee will not be held responsible for not meeting the RPO.
- iii. If licensee has executed a PPA with a generator of renewable & cogeneration sources for supplying power from certain date and generator fails to supply such power within such date for the concerned year.
- iv. If a generator discontinues supply of electricity under PPA on any ground to a distribution licensee other than non-payment of energy bill. But this concession shall be applicable only for the particular year of discontinuation.
- v. If PPA is terminated due to the reasons as provided in Regulation 6.1(i).

#### 5.0 **Determination of Price of Electricity from Cogeneration and / or Renewable Source:**

5.1 Price for purchase of electricity from cogeneration and / or renewable sources shall be agreed mutually by the licensees and the suppliers at a level not above the price cap indicated by the Commission in these regulations. Price determined under these regulations will not be re-determined under Tariff Regulations.

- 5.2 To facilitate examination of reasonableness of price at which a licensee shall procure energy from cogeneration and / or renewable sources, the prospective purchaser may require the seller to submit all cost data and finance charges to the purchaser. MOU/PPA shall also include the terms and conditions of delivery point, meter-reading, meter-rent, billing, payment, payment security arrangements, rate of delayed payment surcharge etc. MOU / PPA as agreed between the seller and the purchaser shall be submitted to the Commission for approval. The Commission at this stage shall not debar a licensee from agreeing to a negotiated price within the capped price except for solar power. 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 and purchaser before the Act came into force and also the PPA already executed based on earlier Regulations of the Commission on cogeneration and / or generation of electricity from renewable sources made under any of the repealed regulations shall remain valid. All the PPAs signed after the publication of these regulations are required to get the approval of the Commission. The PPA will become effective only after getting the approval. However, the licensee shall not decline to purchase energy from such sources within the specified capped price as per these regulations from the existing units which have already covered the validity period of the capped price as was indicated in the earlier Regulations of the Commission until the minimum target RPO is achieved each year provided that connectivity and all other conditions are consistent with these regulations.
- 5.3 Notwithstanding anything contained contrary to any other regulations, the solar power shall be purchased through competitive bidding only. However the solar power purchased from any source under JNNSM bundled power which are selected through competitive bidding, will not be required to go through any separate competitive bidding by the licensee.
- 5.4 The generating station covered under the above PPA/MOU as discussed in regulation 5.2 of these regulations shall not be considered for eligibility and registration for certificates under CERC REC Regulations.
- 5.5 If any renewable generator, captive or not, engaged part of its capacity of the plant under the PPA as mentioned in regulation 5.2 of these regulations, in such case for partial generation of the plant, proportionate energy from such plant shall be required to be scheduled under this PPA after meeting its own captive consumption in case of captive generation.

## **6.0 Price Capping for Energy from Cogeneration and / or Renewable Sources:**

### **6.1 Source-wise Price Capping**

#### **(i) Bio-mass**

The price at which the renewable energy from bio-mass source can be sold to a licensee is capped at Rs 5.41 per kWh and within the capped price the levelised fixed cost shall not be more than Rs. 2.06 per kWh and shall remain fixed for five years from the date of coming into force of these regulations or till the date of further notification on this price cap by the Commission whichever is earlier. The Commission may re-fix the capped price and validity period along with the rate of escalation suo-motu in consideration of information from market sources through separate notice. 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. The bio-mass generator (seller) shall furnish monthly fuel usage statement for each month along with monthly energy bill to the purchaser

licensee. The statement shall include quantity of fuel consumed for each fuel type during the month, actual gross energy generation during the month, opening fuel stock quantity for each type of fuel in the beginning of the month, receipt of fuel quantity for each fuel during the month etc. At the end of the year a statement of audited accounts of fuel usage for each year certified by a Chartered Accountant shall be submitted to the purchaser licensee and any discrepancy noted by the purchaser licensee shall be brought to the notice of the Commission. Non-compliance with the condition of fossil fuel usage by the generator shall result in withdrawal of applicability of price as per these regulations and for the concerned period price will be re-calculated and accordingly payment will be made to the seller but such price shall not be higher than the capping price for Bio-mass. Moreover, the PPA will have to be terminated and for next five years no power will be purchased by any licensee of West Bengal from it.

For a bio-mass plant a two part price (fixed charge and energy charge) may be agreed to by the purchaser with the provision for allowing an increase in energy charge annually by finding the lowest out of the following three.

- i) annually 5% over the energy charge of the previous year.
- ii) applying escalation index for domestic coal fired power station at the start of a year on energy charge at the start of the previous year where such index is as per notification by CERC for Case - I bidding which were notified during the previous year.
- iii) applying increase in wholesale price index for food articles at the start of the year on the energy charge at the start of the previous year. Such wholesale price index shall be taken from the declaration of Ministry of Commerce & Industry of GOI.

For the first year of the PPA the energy charge is as considered in the detailed project report or fixed at the time of introduction of two part price in the PPA. For two-part price determination the elements of fixed charge component may be fixed by the licensee on the basis of principles as laid down in the Tariff Regulations subject to approval of the Commission on submission of the PPA. Notwithstanding anything contained contrary elsewhere in any other regulation in case a PPA becomes effective in between the start and end of a year, then there will be no escalation in the second year for the energy charge. In such case the energy charges on first and second year will be the same. The seller of power shall submit all documentary evidence as required by the purchaser in this regard for determination of two part price.

Provided that the price of electricity (price of electricity = fixed charge + energy charge consisting of fuel cost only) as per the two part price decided for bio-mass plant during the year of implementation of such rate shall not exceed the capped price as per these regulations.

**(ii) Wind**

For wind energy, the price cap shall be at Rs. 5.71 per kWh for ten years from the date of coming into force of these regulations.



**(iii) Small hydro Generating Station**

For Small hydro Generating Station the selling price of energy from Small hydro Generating Station shall be subject to the following conditions:

- a. For energy from Small hydro generating station of any generating company (not pumped storage sources), the price cap is fixed at Rs 4.42 per kWh for five years from the date of coming into force of these regulations.
- b. Notwithstanding anything contained contrary elsewhere in these regulations for energy from own hydro generation (including own small hydro generating station) of a distribution licensee tariff or ARR (Aggregated Revenue Requirement) or generation cost will be determined by the Commission as per Tariff Regulation while determining the retail tariff for the distribution licensee.

**(iv) Cogeneration**

The price cap for cogeneration plant shall be at Rs. 3.34 per kWh and the same shall remain in force for five years or till further notification on this price cap by the Commission whichever is earlier.

For a cogeneration plant a two part price (fixed charge and energy charge) may be agreed to by the purchaser with the provision for allowing an increase in energy charge annually by finding the lowest out of the following three.

- i) annually 5% over the energy charge of the previous year.
- ii) applying escalation index for domestic coal fired power station at the start of a year on energy charge at the start of the previous year where such index is as per notification by CERC for Case - I bidding which were notified during the previous year.
- iii) applying increase in wholesale price index for coal at the start of the year on the energy charge at the start of the previous year. Such wholesale price index shall be taken from the declaration of Ministry of Commerce & Industry of GOI.

For the first year of the PPA the energy charge is as considered in the detailed project report or fixed at the time of introduction of two part price in the PPA. For two-part price determination the elements of fixed charge component may be fixed by the licensee on the basis of principles as laid down in the Tariff Regulations subject to approval of the Commission on submission of the PPA. Notwithstanding anything contained contrary elsewhere in any other regulation in case a PPA becomes effective in between the start and end of a year, then there will be no escalation in the second year for the energy charge. In such case the energy charges on first and second year will be the same. The seller of power shall submit all documentary evidence as required by the purchaser in this regard for determination of two part price.

Provided that the price of electricity (price of electricity = fixed charge + energy charge consisting of fuel cost only) as per the two part price decided for cogeneration unit during the year of implementation of such rate shall not exceed the capped price as per these regulations.

**(v) Solar PV**

- a. In case of PPA already executed for grid connected Solar PV power plants of capacity ranging from 250 KW to 5 MW and already commissioned or to be commissioned within 31st March, 2013 and/ not availing or to avail or not to avail on commissioning the generation based incentive of MNRE prices shall continue to be guided as per PPA already made out as per the Commission's earlier Regulations on cogeneration and generation of electricity from renewable sources made under Notification No. 39/ WBERC dated 25.03.2008. Incentive, if any, received by a licensee from MNRE on this account shall be passed on to its purchasers of electricity.

The capped price of energy for grid connected Solar PV power plants (including those plants which are availing accelerated depreciation benefit under section 32 of the Income Tax Act, 1961) which are not eligible for any incentive declared by MNRE, shall be Rs. 8.90 / kWh for sale to the licensees and such price will be applicable for the grid connected Solar PV power projects commissioned upto 2012-13 and shall remain valid for 25 years. The capped price of energy and period of validity for grid connected Solar PV power plants (including those plants which are availing accelerated depreciation benefit under section 32 of the Income Tax Act, 1961) which are commissioned after 2012-13 shall also be Rs 8.90/ kWh for the projects commissioned upto 2015 - 2016 or till the date as notified by the Commission, whichever is earlier and shall remain valid for 25 years. If at any stage in future such Solar PV power plants which are ineligible to avail the generation based incentive, become eligible for any incentive declared by MNRE or by the State or Central Government, the Commission may review the capped price for sale to the licensees and fix a new capped price duly taking into consideration the allowable incentive to such Solar PV power plants.

Capacity of Grid Connected Solar PV Power Plant should be equal to or above 100KW where the PPA will be executed from 2012-13.

- b. For solar-thermal the price will be determined by the Commission on getting application. In case of solar thermal is received as a part of bundled power and JNNSM programme or through competitive bidding under section 63 of the Act, then such price will be adopted by the Commission.
- c. Roof-top Solar PV sources can be installed for injecting into the distribution system of a licensee only by such institutional consumer(s) like Government and private hospitals and health centres, hospitals and health centres owned and run by any private charitable organization, Government and Government aided and private 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 consumers of any housing complex located in the same premises, commercial/industrial organisations and any institutions registered under any statute.

Provided that total installed capacity in such premises shall not be less than 5 kW.

Provided also that 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 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 year. Any excess energy injected by the above mentioned consumer(s) from the roof-top solar PV sources being more than 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 year. Slab tariff, as per applicable tariff order under the Tariff Regulations, 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 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 periods of that year the billed amount for energy will be nil for that billing period(s). At the end of the year, if the total energy supplied by the licensee to the consumer(s) for that year is found to be less than the energy injected by the roof-top solar PV sources of that consumer(s) for that 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 year and the same shall be treated as unwanted / inadvertent injection. At the beginning of each 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 year the licensee shall show the quantum of injected energy from roof-top Solar PV sources in the billing period, supplied energy from its source in the billing period, net billed energy for payment by the consumer 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 seller of such roof-top Solar PV sources shall include necessary terms and conditions of meter reading, meter-rent, billing, payment, payment security arrangements, rate of delayed payment surcharge etc. However, meter-rent applicable for each meter shall not be higher than the meter-rent as applied for the seller as consumer.

**(vi) MSW**

The price at which the electricity generated through combustion route by directly using the Municipal Solid Waste (MSW) as fuel or by utilizing land fill gas can be sold to a licensee is capped at Rs 5.12/ kWh and shall remain fixed for a period of ten 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 for generation of electricity through combustion route. The seller shall furnish monthly fossil fuel usage statement and audited accounts figure of fuel used in similar manner as specified under Bio-mass generation in regulation 6.1(i) of these regulations.

**(vii) Bio-gas**

Electricity generated from Bio-gas Plant can be sold to the licensee at a capped price of Rs. 6.24/ 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 bio-gas plant shall be the gas

produced by fermentation of cow dung in a multistage process through the activity of anaerobic micro-organisms. The price shall be two-part consisting of fixed charge and energy charge consisting of fuel cost only. The price will remain fixed up to 2015-16.

- 6.2 All price caps as specified in these regulations shall exclude all applicable taxes on the sold energy but include cost of connectivity through suitably connected line upto the delivery point.
- 6.3 The Commission may, at any time, review the period of capped price, mentioned in these regulations, if necessary. In such case the capped price of different vintages of generating station will be revised separately as per following:
- i) The generating station for which PPA was done under regulations repealed through these regulations.
  - ii) The generating station for which PPA was done under these regulations.
  - iii) The generating station for which PPA will be done after such review.

However, such review will take place at least after five years if not earlier.

- 6.4 The above capped prices under 6.1 for generation from different types of sources shall be applicable for the new units which will be in operation after issue of these regulations and also for existing units under PPA under the repealed regulations, which have already covered the validity period of the capped price. For the existing units under the existing PPA executed under repealed regulations the capping price will be as per repealed regulations.

Provided that for existing fossil fuel used (partly or fully) in cogeneration plant or Bio-mass plant such price cap of existing units under the existing PPA executed under repealed regulations may be revisited due to increase in fuel cost part only and price may be re-determined prospectively only through new PPA subject to applicability of capping price as provided in these regulations as detailed out in regulation 6.5 and 6.6 and where new PPA will be for a period as mentioned in clause (xvi) of regulation 16.3 means the period already covered from date of commercial operation of the plant. The fixed charge under new PPA shall be based on the information on the basis of which the existing PPA has been done.

Provided further that for the existing unit(s) of Small hydro Generating Station the power purchase price of existing unit(s) can be increased annually at the rate 1% prospectively through execution of any supplementary agreement to the principal agreement done under the repealed regulations.

- 6.5 For an existing bio-mass plant under the existing PPA executed under repealed regulations a new price of electricity on the basis of two part price may be agreed by the buyer and seller through a new PPA under these regulations where fixed charge and energy charge will be decided on the basis of the documents including different operational and performance parameters (such as Plant Load Factor, auxiliary energy consumption, plant availability factor, station heat rate, distribution loss of evacuating delivery line) which were submitted during finalization of the existing PPA. The energy charge so fixed shall thereafter be increased annually as specified in regulation 6.1(i) of these regulations.

Provided that the price of electricity (price of electricity = fixed charge + energy charge consisting of fuel cost only) as per the two part price decided for bio-mass plant during the year of implementation of such rate shall not exceed the capped price as per these regulations.

Provided also that fixed charge will remain the same as found on the basis of submitted information during finalization of the existing PPA.

Provided also that to reach at the base energy charge for the new PPA, lower price of the following two will be considered:

- a) The calculated energy charge on the basis of the latest audited data for fuel cost.
- b) The energy charge arrived at the time of execution of new PPA by applying annual increase rate over the energy charge of the existing PPA based on the submitted data at the time of the execution of existing PPA by finding the lowest rate out of the following three:
  - i) annually 5% over the energy charge of the previous year.
  - ii) applying escalation index for domestic coal fired power station at the start of a year on energy charge at the start of the previous year where such index is as per notification by CERC for Case - I bidding which were notified during the previous year.
  - iii) applying increase in wholesale price index for food articles at the start of the year on the energy charge at the start of the previous year. Such wholesale price index shall be taken from the declaration of Ministry of Commerce & Industry of GOI.

Provided further that the aforesaid two part price for an existing bio-mass plant shall be applicable prospectively from the date of effect of the new PPA.

- 6.6 For an existing cogeneration plant under the existing PPA executed under repealed regulations a new price of electricity on the basis of two part price may be agreed by the buyer and seller through a new PPA under these regulations where fixed charge and energy charge will be decided on the basis of the operational and performance parameters (such as Plant Load Factor, auxiliary energy consumption, plant availability factor, station heat rate, distribution loss of evacuating delivery line) which were submitted during finalization of the existing PPA. The energy charge so fixed shall thereafter be increased annually as specified in regulation 6.1(iv) of these regulations.

Provided that the price of electricity (price of electricity = fixed charge + energy charge consisting of fuel cost only) as per the two part price decided for cogeneration unit during the year of implementation of such rate shall not exceed the capped price as per these regulations.

Provided also that fixed charge will remain the same as found on the basis of submitted information during finalization of the existing PPA.

Provided also to reach the base energy charge for the new PPA, lower of the following two prices will be considered:

- a) The calculated energy charge on the basis of the latest audited data for fuel cost.
- b) The energy charge arrived at the time of execution of new PPA by applying annual increase rate over the energy charge of the existing PPA based on the submitted data at the time of the execution of existing PPA by finding the lowest rate out of the following three:

- i) annually 5% over the energy charge of the previous year.
- ii) applying escalation index for domestic coal fired power station at the start of a year on energy charge at the start of the previous year where such index is as per notification by CERC for Case - I bidding which were notified during the previous year.
- iii) applying increase in wholesale price index for coal at the start of the year on the energy charge at the start of the previous year. Such wholesale price index shall be taken from the declaration of Ministry of Commerce & Industry of GOI

Provided further that the aforesaid two part price for an existing cogeneration plant shall be applicable prospectively from the date of effect of the new PPA.

- 6.7 Renovation and Modernization (R&M) of the existing plants, if considered beneficial after completion of at least 70% of their useful life, can be taken up. The seller shall submit details of work with cost break up and cost benefit analysis to the purchaser. The purchaser may allow the seller to capitalize the R&M cost and agree to a new rate and in such case of R&M the regulation 6.4 will not become applicable.

Provided that the aforesaid new rate after capitalization of R&M cost shall not exceed the capped price as per these regulations.

- 6.8 Notwithstanding anything to the contrary contained elsewhere in these regulations, the price of energy purchased by any distribution licensee from cogeneration and / or renewable sources shall not be determined for a part of such purchase under these regulations and for balance part of such purchase under other regulations. The price of energy purchased by distribution licensee from any cogeneration and/or renewable sources shall be determined as per these regulations for the entire purchase of power of such sources if it is a generator and in case of captive generation such purchase shall be for entire surplus after the captive consumption.

- 6.9 For any existing agreement where a part of the power from a source is purchased as per regulation which were repealed by these regulations and balance part through other mechanism for those cases such PPA may continue and for such PPA the capping price of the repealed regulations as considered in such PPA shall also be considered as capping price for those PPAs under these regulations. However, if any of the parties of existing PPA intends to enter into a fresh agreement under these regulations in place of existing PPA then existing PPA can only be terminated when the execution of the new agreement is made in terms of these regulations and where the condition of regulation 6.8 will be applicable and where new PPA will be for a period as mentioned in clause (xvi) of regulation 16.3 means the period already covered from date of commercial operation of the plant. The fixed charge under new PPA shall be based on the information on the basis of which the existing PPA has been done.

- 6.10 Notwithstanding anything contained contrary to any other regulations for procurement of power of renewable and/or cogeneration energy from outside West Bengal the applicability of capping price and purchase price will be considered at the point of CTU and STU boundary.

## 7.0 Connectivity:

- 7.1 The cogeneration and / or renewable energy sources excepting roof-top Solar PV and bio-gas sources shall be connected to the State Grid at a voltage level of 132 KV or 66 KV or 33 KV or 11 KV or 6 KV subject to technical suitability determined by the licensee. The delivery point shall be the nearest grid sub-station having 132 KV / 66 KV / 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 licensee, STU and Generator. Such connectivity shall also be provided for use of licensee's system under open access. More than one such project established by the same Generator located near each other are to be clustered together as far as possible in order to avail connectivity with the grid sub-station.
- 7.2 Roof-top Solar PV sources of capacity as mentioned in regulation 6.1(v)(b) of these regulations shall be allowed connectivity at LV or MV or 6 KV or 11 KV or any other voltage of the distribution system of the licensee as considered technically and financially 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 6.1(v)(b) of these regulations or alternatively by an export-import type three phase meter suitable for directly measuring the net exchange. In this context the licensee will decide whether separate meter or export-import meter will be installed for net metering purpose. 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).
- 7.3 Bio-gas Plants, if connected to the distribution system, shall be connected at 415 V, 3 phase or at 6 KV or 11 KV of the distribution system of the licensee according to the technical suitability examined by the licensee.
- 7.4 Communication system between grid sub-station and generating station shall be developed by the seller at its / their cost. Protection schemes shall be examined by the licensee to suit the requirements. Sellers of cogeneration and / or renewable energy sources shall abide by all applicable codes, rules, regulations etc. in regard to operational and commercial practices.
- 7.5 Wherever cogeneration and / or renewable energy sources have already been connected to the State Grid at a voltage level lower than the voltage level specified in these regulations 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 into suitable voltage level preferably with double circuit line and cost for such conversion shall be borne by the seller.
- 7.6 For the purpose of grid connectivity for a new small-hydro and island based wind projects, if the length of the evacuation line to be drawn by the seller is greater than 5 km, cost of the line beyond 5 km is to be equally shared by the seller and transmission/distribution licensee, as the case may be. However, this clause will not be applicable for the existing power stations under any PPA under repealed regulations.

7.7 Each licensee within six months from the date of publication of these regulations shall come out with a connectivity procedure with technical details and submit such procedure to the Commission for approval. On the basis of such approved connectivity procedure along with this the connectivity of renewable & cogeneration unit will be allowed to be connected in the grid. However, as and when any problem arises in providing such grid connectivity according to the procedure or till the procedure is fixed, the matter is referred to the Commission for appropriate order. Such procedure may be updated once in every two years or earlier if necessary with prior approval of the Commission.

#### **8.0 Dispatch Principle and mismatch/ Unscheduled Interchange charges:**

8.1 All renewable energy power plants except bio-mass power plants, cogeneration plants and Municipal Solid Waste (MSW) plants with capacity of 10 MW and above shall be treated as 'Must Run' power plants and shall not be subjected to 'merit order despatch' principles. Must Run power plants/ open access customers purchasing power from Must Run power plants shall submit a 24 hours day ahead schedule to the Nodal Agency on mutually agreed time block (TOD basis) for operational convenience. In case it is found provision of such schedule is varied widely without any justified reason for a number of occasions, then on the basis of complain from concerned distribution licensee or SLDC the Commission will take appropriate decision which will be binding to the generator. No mismatch/ Unscheduled Interchange charges will be payable for such power plants.

8.2 The bio-mass power plants, cogeneration plants and Municipal Solid Waste (MSW) plants with capacity of 10MW and above and open access customers of these plants shall come under ABT mode of operation. A 24 hours day ahead schedule shall be submitted as per ABT mode of operation to the Nodal Agency as per the State Grid Code. Unscheduled / mismatch charges for deviation from the schedule shall be paid weekly as per rate as specified in the Tariff Regulations. The modalities regarding revision of schedule, billing and payment mechanism shall be in accordance with the State Grid Code and Tariff Regulations.

#### **9.0 CDM Benefits:**

9.1 The proceeds of carbon trading from approved Clean Development Mechanism (CDM) projects shall be the income of the Generator.

#### **10.0 Open Access for Cogeneration and / or Renewable Sources of Energy:**

10.1 Any person generating electricity from cogeneration and / 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.

10.2 In case of procurement of power from renewable and cogeneration energy sources lying outside the area of the Distribution licensee, the seller of renewable and cogeneration energy sources will have the responsibility of availing open access at least up to the point of periphery of distribution licensee or the STU/CTU boundary as will be decided by the distribution licensee.

10.3 The availability of norms of dedicated transmission line or any dedicated distribution line connected between the delivery point at grid and the Generator (renewable and/or cogeneration) shall be in accordance with the Open Access Regulations. Alternatively the Generator can maintain such line at its own cost to ensure its availability according to its need.



**11.0 Charges for Open Access:**

11.1 All open access charges shall be payable as per Open Access Regulations and Tariff Regulations except meter rent, meter reading and other related charges.

11.2 Meter rent and meter reading and other related charges shall be paid by an 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.

**12.0 Transmission Charges:**

12.1 Transmission charges applicable for use of transmission network or associated facilities of a licensee by long term and / or short term open access customers for conveyance of electricity from cogeneration and / or renewable energy sources shall be such charges as applicable as per relevant tariff order.

**13.0 Wheeling Charges:**

13.1 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 / or renewable energy sources shall be wheeling charges as applicable as per relevant tariff order.

**14.0 Reactive Energy Charges:**

14.1 Reactive energy charges will be payable as per Open Access Regulations for all cogeneration and renewable sources of power generation except for wind power generation. For wind power the rate will be three times the rate of the reactive energy charges specified in Open Access Regulations.

**15.0 Other charges for Open Access:**

15.1 All other charges for open access shall be in terms of Open Access Regulations.

**16.0 Procedure to be followed for Renewable and / or Cogeneration Energy Sources:**

16.1 For procurement of renewable and /or cogeneration energy through negotiated route, after preliminary discussions with the buyer licensee, the generator shall submit full details of the generation project along with cost data and finance charges and price for direct sale to the licensee.

16.2 The buyer licensee shall examine the price proposal in the light of price reasonableness, impact on consumer tariff and the price cap specified in these regulations.

16.3 MOU / PPA shall be signed between the generator and the purchaser. In case of open access, a separate wheeling or transmission agreement shall be signed between generator and the transmission and / or wheeling agency.

In the MOU / PPA at least the following points are required to be incorporated suitably in line with these regulations:

- i) Details of connectivity.
- ii) Date of completion of project and/ or date of commencement of supply.
- iii) Month wise quantum of supply.
- iv) Time wise quantum of supply (peak / off peak).

- v) Technical and commercial obligation.
- vi) Security and modes of payment of each party etc.
- vii) Operational, financial and other parameters considered for price determination for sale of energy to the purchaser. This shall also include technical loss considered for delivery of energy at delivery point through the dedicated transmission / distribution lines shall not be higher than the norms as laid down in Open Access Regulations for applicable respective voltage level.
- viii) There shall be a provision in the PPA containing that operational parameters will not be allowed to be varied in subsequent period for at least 15 years or the useful life period of the plant from the date of commencement of operation, whichever is less. On completion of such period operational parameter may be allowed to vary considering the aging of the equipments for re-determination of tariff within the capping price of the then regulations subject to approval of the Commission.
- ix) The PPA shall contain a provision where change in such operational parameters may be there to the extent it is affected due to aging of the equipment after the period as mentioned in (viii) above. Such clause shall also include the impact of the scenario where R&M may take place.
- x) In annexure of the PPA the methodology along with calculation of reaching the price of the energy from the renewable sources is to be shown specifically.
- xi) Selling price of energy from renewable and / or cogeneration energy sources.
- xii) In case of financial and other parameters the extent of variation allowable subsequently shall be clearly mentioned in the PPA.
- xiii) PPA shall include a termination clause in such a manner that if the generator fails to supply power to the licensee within one year from the date of supply as agreed in the PPA or discontinue the supply for more than one year for any reason(s) whatsoever then such PPA shall be automatically cancelled.
- xiv) The PPA shall have the provision for price rate for start up power as defined in Open Access Regulations.
- xv) Termination clause of the agreement shall also include a clause by which Commission can order for termination of the agreement in case of violation of grid discipline.
- xvi) Dispute resolve mechanism.
- xvii) The time period of the PPA validity.

Provided that for the existing plant where PPA will be done under regulation 6.5, 6.6 and 6.9 of these regulations the minimum period of PPA will be reduced by the year that has been already covered out of the useful life of the plant as defined in these regulations.

- 16.4 The MOU / PPA, as agreed and signed, shall be submitted to the Commission for approval so that such purchasing price will be approved under 86 (i) (b) of the Act.
- 16.5 Any person generating electricity from renewable sources shall abide by all applicable Codes/ Regulations/ Rules and instructions given by SLDC and/or ALDC as applicable from time to time.

- 16.6 For the purpose of these regulations the useful life of any renewable sources and/or cogeneration plants shall be considered as per the regulation of West Bengal Electricity Regulatory Commission as published from time to time.
- 16.7 Renewable and / or cogeneration energy purchased through competitive bidding route shall also cover the point under 16.3 in the PPA.
- 16.8 All the existing PPA shall be amended to include the points under 16.3.
- 17.0 In order to remove any uncertainty in electricity business, any licensee or generating company may submit any application to the Commission for getting 'in principle' clearance on any issue and/or for incurring any expenditure for which there is no specific approval mechanism mentioned under these regulations and have an impact on the price of the licensee or generating company prospectively.
- Provided that in issuing such 'in principle' clearance, the Commission shall follow such procedure as is deemed necessary.
- 18.0 Power to Amend:**
- 18.1 The Commission may from time to time add, vary, alter, modify or amend any provisions of these regulations.
- 19.0 General Power:**
- 19.1 The Commission may suo-motu or on an application from any person generating electricity from cogeneration and / or renewable sources or a buyer licensee, review these regulations and pass appropriate orders to remove any difficulty in implementing the provisions of these regulations.
- 19.2 Nothing in these regulations shall be deemed to limit or otherwise affect the inherent power of the Commission to make such orders as may be necessary for meeting the ends of justice, or to prevent the abuse of the process of the Commission.
- 20.0 Repeal and Saving:**
- 20.1 The West Bengal Electricity Regulatory Commission (Cogeneration and Generation of Electricity from Renewable Sources of Energy) Regulations, 2010 issued under Notification No.47/WBERC dated 10.08.2010 and published in the Kolkata Gazette Extraordinary Part I dated 10.08.2010 are hereby repealed.
- 20.2 Notwithstanding such repeal, anything done or any action already taken under the repealed Regulations, shall in so far as it is not inconsistent with these regulations, be deemed to have been done or taken under the corresponding provisions of these regulations.

By Order of the Commission

Place: Kolkata  
Date: 22.03.2013

K. P. BHAR,  
*Secretary of the Commission.*

