

## NOTIFICATION

**Jaipur, 24.5.2010**

**No.RERC/Secy/Reg 81** -In exercise of the powers conferred on it by section 61 read with section 181 of the Electricity Act 2003 (No.36 of 2003),the Rajasthan Electricity Regulatory Commission, after previous publication, makes the following Regulations, namely:

### **1. Short title and commencement**

- (1) These Regulations may be called 'The Rajasthan Electricity Regulatory Commission (Tariff for sale of power by Captive Power Plants to distribution licensees) Regulations, 2010, in short RERC (CPP) Regulations, 2010.
- (2) These Regulations shall come into force from the date of their publication in the official gazette.
- (3) These Regulations will be applicable on captive Power plants excluding power plants based on Renewable Energy Sources.
- (4) In case of procurement of power by distribution licensee through Power Exchange or through competitive bidding from generating companies including CPPs, the provisions of these regulations shall not be applicable.

### **2. Definitions**

- (1) 'Act' means the Electricity Act, 2003.
- (2) 'Captive Power Plant' or 'CPP' or "Captive Generating Plant" means a power plant as defined in the Electricity Act 2003 and meets the requirement of rule 3 of Electricity Rule 2005.
- (3) 'Inadvertent power supply' means unrestricted flow of power from CPP on account of inevitable mis-match between generation and load, and which can not be stopped by licensee/CPP. Inadvertent supply will however, be unscheduled, non contractual and uninterruptible.
- (4) 'Existing Captive Power Plants' means CPPs in operation prior to date of notification of these Regulations including CPPs whose PPAs have been signed.
- (5) 'Long term power supply' means the agreement entered between the CPP and distribution licensee for supply of power by CPP for the specified duration of the Contract Period equal to one year or more.
- (6) 'Peak hours' means 18:00 hours to 22:00 hours of the day or such other hours of the day as may be notified by the licensee in its area of supply.
- (7) 'Off-Peak' hours means 00:00 hour to 06:00 hours and 22:00 hours to 24:00 hours of the day or such other hours of the day as may be notified by the licensee in its area of supply.
- (8) 'Normal hours' means hours other than Off Peak hours & Peak hours.
- (9) 'Despatch Schedule' means the ex-power plant net MW output of a CPP, scheduled to be exported to the grid from time to time.

- (10) 'Short term power supply' means the agreement entered between the CPP and distribution licensee for supply of power by CPP for the specified duration of the Contract Period of less than one year.
- (11) 'Stand by Supply' means supply required by any person who have set-up the power plant primarily for his own use which shall also be called as parent unit of CPP, contracted with the distribution licensee to cater the demand during the period of outage of the CPP.
- (12) 'Start up Supply' means essential load of the CPP required during outage as well as for start up load of the CPP as contracted with the distribution licensee. Start-up supply thus includes stand by supply for CPP.
- (13) 'Month' means a calendar month commencing from 00:00 hours of the first day of the month and ending on 24:00 hours of the last day of the month.

The words or expression in these Regulations, which are not defined herein, shall have the same meaning as defined in the rules, regulations & Act in the order specified hereunder.

- (a) Ministry of Power Rules ref. GSR 379(E) notified on June 8, 2005 including amendments thereto.
- (b) Rajasthan Electricity Regulatory Commission (Terms & Conditions for determination of tariff) Regulation 2009 or in short RERC Tariff Regulations, 2009.
- (c) The Electricity Act 2003 (the Act).

### **3. Options for Sale of Power by CPP**

The Captive Power Plant shall have the option for sale of electricity available after meeting the eligibility criteria of CPP as stipulated under Electricity Rule 2005; to:

- (a) distribution licensee within the state under different mode of commercial arrangements; and/or
- (b) third party, including Power Exchange through open access which shall be governed by existing Open Access Regulations.

### **4. Tariff for sale of power by CPP to distribution licensee under "Long term" arrangement**

- (1) A CPP, irrespective of any saleable capacity, having installed capacity of 50 MW and above, will have option to either get the tariff determined on case to case basis as a generating company by filing petition or may opt for normative fixed charges (levellised) and normative variable charges as determined by the Commission under these regulations. Fixed charges shall be the levellised fixed charges on per kWh basis and variable charges per kWh for supply during different time of the day shall be admissible as under:-
  - (a) during off peak hours: full variable charges plus 20% of fixed charges,
  - (b) during normal supply hours: full variable charges plus fixed charges and
  - (c) during peak hours for supply: full variable charges plus fixed charges and incentive @ 50 paisa per kWh.
  - (d) Round-the-Clock supply: full variable charges plus 80% of fixed charges.
- (2) The Commission shall determine Tariff for procurement of power by licensee from CPP under long term power supply arrangement subject to following conditions:
  - (a) The contract period shall be of duration one year or more.
  - (b) The variable charge component shall be determined in accordance with sub-regulation (3) below.
  - (c) Fixed charge component shall be payable for the power delivered during each time block and shall be determined in accordance with sub-regulation (1) above read with sub-regulation (4) below.
- (3) Variable charge component shall cover fuel costs and shall be worked out on the basis of ex-bus energy delivered from the generating station as per following formula:

- (a) Variable Charge (VC) in Rs/ kWh shall be the sum of the cost of normative quantities of primary and secondary fuel for delivering ex-bus one kWh of electricity in Rs/kWh and shall be computed as under:

$$VC = \frac{100 \times \{P_p \times (Q_p)_n + P_s \times (Q_s)_n\}}{(100 - (AUX)_n)}$$

Where,

$P_p$  = Price of primary fuel namely coal or lignite, as the case may be, in Rs/kg.

$(Q_p)_n$  = Normative Quantity of primary fuel required for generation of one kWh of electricity at generator terminals in kg and shall be computed on the basis of normative gross Station Heat Rate (less heat contributed by secondary fuel oil for coal/lignite based generating stations) and gross calorific value of coal/lignite as fired.

$P_s$  = Price of Secondary fuel oil in Rs./ml,

$(Q_s)_n$  = Normative Quantity of Secondary fuel oil in ml/kWh, and

$AUX_n$  = Normative Auxiliary Energy Consumption as % of gross generation.

Provided that  $P_p$  &  $P_s$ , for the year shall be based on audited figures of previous year & shall be subjected to prudence check by the Commission.

- (b) Station-wise energy charges will be worked out for the purpose of billing based on weighted average rate of actual units generated.
- (c) Adjustment to variable charge on account of variation in price of fuels shall be carried out on quarterly basis based on actual cost of fuel and calorific value of fuel, during immediate preceding quarter. Provided that for any variation in Rate of Energy Charges exceeding 10% of that approved by the Commission during fiscal year, shall be subject to approval of the Commission for which necessary calculations with supporting documents shall be provided in support of the claim.
- (d) Normative performance parameters for the determination of variable charge component under these Regulations shall be as under:

Parameters	Units	Unit Size of CPP (MW)		
		Less than 50 MW	More than 50 but less than 110 MW	110 MW & above
Station Heat Rate	kcal/kWh	3200	3100	As per RERC (Terms & Conditions for determination of Tariff) Regulations 2009
Specific Oil Consumption	ml/kWh	3.00	2.50	
Auxiliary Consumption factor	%	11%	10.75%	

Note:- In case of CPP having number of units of different rating, their average rating will be considered.

Provided that norms stipulated above shall be applicable in case of thermal power generating stations of CPPs based on rankine cycle technology and using coal as fuel. In case of lignite fired CPPs, the multiplying factor for Station Heat Rate as specified under Regulation 46(3)(b) of RERC Tariff Regulations 2009, for specific oil consumption operating norm as per Regulation 46(5), for auxiliary energy consumption operating norm as per Regulation 46(7)(c) and for limestone consumption operating norm as per Regulation 46(6) shall be applicable.

Provided further that the variable charge component of CPP based on any other technology other than rankine cycle technology under long term contract arrangement shall be determined on case-to-case basis.

- (4) The fixed charge component shall be worked out as per RERC tariff Regulation 2009 subject to following changes.

- a) The pre-tax return on equity shall be 15.5% of equity component without grossing up for Income Tax liability.
- b) The operation and maintenance expense for CPPs for unit Size < 110 MW shall be Rs 12.17 Lakh/MW for 2009-10

The annual escalation rate for O&M Expenses shall be as per the provisions of RERC (Terms & Conditions for determination of Tariff) Regulations 2009.

- (5) Annual Fixed Charge (AFC) will comprise of total annual expenses of CPP computed on the basis of expenses and return allowed in terms of Part III read with Regulations 46, 48 & 49 of the RERC (Terms and Conditions for determination of Tariff) Regulations, 2009 to the extent modified in these Regulations.

Provided that for determination of tariff, on case to case basis, for CPPs with installed capacity of 50 MW and above, capital cost shall be considered as Rs 4 Crore per MW of installed capacity.

Provided further that, for the determination of normative tariff, for CPPs having installed capacity less than 50 MW, capital cost shall also be considered as Rs 4 Crore per MW of installed capacity.

- (6) Payment of Fixed Charges shall be made on monthly basis and based on delivered energy.
- (7) Normative parameters vide sub-regulation (3) to (5) above shall be subject to review at the end of existing tariff control period.

#### 5. Tariff for sale of power by CPP to distribution licensee under Short term Power supply

- (1) The arrangement for power supply by CPP to the distribution licensee for period less than one year shall be treated as short term power supply.
- (2) The tariff for short term power supply by CPP shall be as follows:

Applicable Rate for Tariff	Period (November to June)	Period (July to October)
Rate for procurement during 'Peak hour'	110% of energy charge component of HT industrial Tariff as applicable	100% of energy charge component of HT industrial Tariff as applicable
Rate for procurement during 'Non-peak hour' (other than peak hours).	Applicable Rate for procurement during 'Peak Hour' less Rs 0.50/kWh	Applicable Rate for procurement during 'Peak Hour' less Rs 0.50/kWh

Note: Energy charge component shall include approved fuel cost adjustment (FCA) charge, as applicable.

#### 6. Tariff for deemed sale of power by CPP to distribution licensee for inadvertent power arrangement

- (1) The inadvertent power injection by CPP beyond 1% of the installed capacity of CPP or injection in violation of SLDC's intimations for deemed inadvertent power vide regulation 3(a), shall neither be paid nor banked.
- (2) The UI rate, as applicable at 50.0 Hz, shall be applicable for net inadvertent power injection at the end of three months settlement period.

## **7. Other charges**

### **(1) Grid connectivity charges**

- (a) The connectivity of CPP to Grid or State transmission system shall be governed by the connection conditions stipulated under State Grid Code and Connectivity Regulations of Central Electricity Authority.
- (b) The Commission shall specify from time to time the 'Grid connectivity charges' to be applicable for parallel operation of the CPP with the grid separately.

### **(2) Charges for Reactive Energy Exchanges**

- (a) The CPP shall strive to maintain the power factor close to unity.
- (b) The CPP shall inject/absorb the reactive energy as per the directions of state load dispatch centre. Such injection/absorption shall be undertaken on the basis of machine capability and in accordance with the directions issued by SLDC. A rate of charge/payment for shortfall in reactive energy exchange (injection or absorption) shall be levied on generating station at rate 5.75 paise/kVArh for FY 2009-10 escalated at 0.25 paise/kVArh annually in subsequent years, unless otherwise revised by Commission.
- (c) Till meters as per sub-regulation (b) are installed, reactive energy charges shall be levied on net reactive energy drawl/ injection by the CPP.
- (d) Above mechanism of reactive energy charges shall be applicable as interim arrangement till the RVPN undertake reactive energy planning studies and ascertain reactive power compensation requirement of the Grid as per State Grid Code.

### **(3) State Load Despatch Centre fee and charges**

SLDC fee and charges including scheduling and operating charges shall be payable as specified in the Rajasthan Electricity Regulatory Commission (Levy of fee and charges by SLDC) Regulations, 2004.

### **(4) Charges for Standby and start-up supply (Optional for CPP)**

- (a) Stand by supply and start up supply shall be effected at the request of CPP or as per agreement with CPP by the distribution licensee. These will be available only during outages for annual planned maintenance, other maintenance and forced outage. Annual planned maintenance schedule will be given by 15th November, to be finalized by SLDC/NRLDC. Other planned maintenance shall be effected with 2 days advance notice, except in unforeseen circumstances such intimation may be sent within 30 minutes of unit outage.
- (b) Standby and start up supply during a month shall be billed at temporary supply tariff on daily basis as per tariff for supply of electricity notified by the distribution licensee with the approval of the Commission as applicable to HT large industrial supply service. Contracted standby start up supplies shall be subject to minimum annual drawl for 42 days in a financial year.
- (c) In case CPP does not contract for standby or start-up supply, it can apply for temporary supply as and when break down occurs as per prevailing terms & conditions of supply of the distribution licensee.

## **8. Applicability of ABT**

As compensation to CPP is linked to 'actual energy delivered' by CPP and not linked to 'energy schedules' furnished by CPP, the provisions of Intra state ABT Regulations as

notified in the RERC (Intra state ABT) Regulations 2006 shall not be applicable to CPP. However, in case CPP is required to sell any or part of its capacity outside the State of Rajasthan then provisions of RERC (Intra-State ABT) Regulations 2006 shall be applicable to such CPP.

## **9. Scheduling**

CPPs with installed capacity of 25 MW and above, and effecting supply under long term and short term power supply agreement shall be subject to 'Scheduling and Despatch Code' as stipulated under State Grid Code and relevant Regulations. The methodology of scheduling and availability shall be as provided in the State Grid Code Regulations. However, it is clarified that the CPPs shall furnish schedules to SLDC for monitoring, co-ordination and control purposes alone; the payment to CPPs shall be based on actual energy delivered by CPP and not linked to schedules furnished by CPP.

## **10. Metering and Accounting**

- (1) Metering arrangements, including installation, testing and operation and maintenance of meters shall be as per the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 and Rajasthan Electricity Regulatory Commission (Metering) Regulations, 2007.
- (2) In case, CPP and its parent unit are located within the same premises (i.e. embedded CPP) then there should be adequate arrangement of separate metering system for metering of generation by CPP and metering of consumption by its parent unit. If parent unit is also a consumer of the licensee and there is arrangement for sale of power by the CPP through the grid, such supply and drawl of power from the grid shall be metered separately, through export and import metering arrangement.
- (3) Collection, transmission and processing of data required for accounting of energy exchanges on the basis of normal hour, peak hour and off-peak hour supply shall be organised by the State Transmission Utility/ State Load Despatch Centre.

## **11. Commercial Arrangement**

### **(1) Agreement for Long term power supply**

A Power Purchase Agreement for long term power supply will be signed between the licensee and the CPP which will clearly indicate the capacity in MW contracted for supply and the agreed time zone during which supply shall be affected. It shall provide payment security mechanism as mutually agreed between licensee and CPP.

### **(2) Agreement for short term power supply**

Short term power supply shall be either through PPA or contract established by exchange of letters, which will clearly indicate the capacity in MW contracted for supply and the agreed time zone during which supply shall be effected and shall provide payment security mechanism as mutually agreed between licensee and CPP.

### **(3) Reduction in contract demand.**

CPP will be allowed to reduce the contract demand of its parent unit with the licensee/Discom at one month notice but not more than once in a year.

### **(4) Billing and Payment**

- (a) The bills for supply of power under long term arrangement shall be raised by CPP on monthly basis for the power supplied during the month to the Distribution Licensee, in whose area the CPP is located.

- (b) The bills for supply of power under short term arrangement shall be raised by CPP on monthly or fortnightly or weekly basis as mutually agreed depending upon the contract duration to the Distribution Licensee(s), as per the contract.
- (c) The bills for supply of inadvertent power shall be raised by CPP on three monthly period basis (April to June, July to September, October to December & January to March) for the net power supplied during the three months period to the Distribution Licensee(s), in whose area the CPP is located.
- (d) The Distribution licensee shall raise the bill of power supply made to CPP and the CPP shall raise the bill for power supplied by it at the end of each month. In case the distribution licensee needs to make payment to the CPP, the same will be done after adjusting for amount payable by CPP for the bills in respect of the energy consumed by the CPP and/ or other charges due to the distribution licensee. The monthly billing shall be subject to interest charges for delay in payment and rebate for prompt payment as specified at regulation 38 and 40 of RERC (Terms and Conditions for determination of tariff) Regulation, 2009.

**12. Powers to deviate from norms**

The Commission may deviate from the norms contained in these Regulations or specify alternative norms for particular cases, where it so deems appropriate, having regard to the circumstances of the case:

Provided further that the reasons for such deviation(s) shall be recorded in writing.

**13. Powers to amend**

The Commission may, at anytime, vary, alter, modify or amend any provisions of these Regulations, with reasons to be recorded in writing.

**14. Power to remove difficulties**

If any difficulty arises in giving effect to any of the provisions of these Regulations, the Commission may by general or special order, direct the State Transmission Utility, State Load Despatch Centre, CPP and licensees to take such action, as may appear to the Commission to be necessary or expedient for the purpose of removing difficulties.

**15. Repeal and Saving :**

- (1) Save as otherwise provided in these Regulations the RERC (tariff for Captive Power Plant) Regulations, 2007 are hereby repealed.
- (2) Notwithstanding such repeal anything done or any action taken or purported to have been done for the purpose of tariff for Captive Power Plant by the licensee shall be deemed to be done under the corresponding provisions of these Regulations.

(Ashwini Bhagat)  
Secretary