

RAJASTHAN ELECTRICITY REGULATORY COMMISSION

Terms and Conditions for Determination of Tariff for Renewable Energy Sources – Biomass, Biogas and Biomass Gasifier Energy) Regulations, 2015, Dated: 26.02.2015 with amendment Dated: March, 2019

Sl. No.	Description	Summary																
1.	Control Period/ Review Period	5 Yrs (April 1, 2015 onwards and upto March 31, 2020).																
2.	Applicability	These Regulations shall apply in cases where generic tariff for generating plants based on Biomass, Biogas and Biomass Gasifier energy is to be determined by the Commission.																
3.	Tariff Period	The Tariff Period for Biomass, Biogas and Biomass Gasifier based power plants shall be twenty (20) years.																
4.	Tariff Design	<ol style="list-style-type: none"> For the purpose of computation of interest on the working capital requirement of the fixed cost component, an escalation of 5% per annum in fuel/feed stock price shall be considered. For the purpose of levelled tariff computation, the discount factor equivalent to post tax weighted average cost of capital shall be considered. Levelling shall be carried out for the Tariff Period of the Biomass, Biogas and Biomass Gasifier based power plants. 																
5.	Despatch Principles	Biomass, Biogas and Biomass Gasifier based power plants shall be treated as 'Must Run' power plants and shall not be subjected to 'Merit Order Despatch' principles.																
6.	Capital Cost	For project specific tariff determination the generating company shall submit the break-up of capital cost items along with its petitions.																
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7.	Debt-Equity Ratio	<ul style="list-style-type: none"> For the purpose of determination of generic tariff, debt-equity ratio shall be 70:30. For project specific tariff, the following provisions shall apply-If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan. 																

8.	Loan and Finance Charges	<ul style="list-style-type: none"> Loan tenure-13 Yrs For the purpose of computation of tariff, normative interest rate of two hundred (200) basis points above the average State Bank of India Marginal Cost of Funds Lending Rate (MCLR) (one year tenor) prevalent during the last available six months shall be considered. 																
9.	Depreciation	<ol style="list-style-type: none"> The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to a maximum of 90% of the capital cost of the asset. Depreciation rate of 5.28% per annum for the first 13 years and remaining depreciation shall be spread over the remaining useful life of the project considering the salvage value of the project as 10% of project cost shall be considered. 																
10.	Return on Equity	<ol style="list-style-type: none"> The value base for the equity shall be 30% of the Capital Cost. The normative Return on Equity shall be 14 %, to be grossed up by prevailing Minimum Alternate Tax (MAT) as on 1st April of previous year for the entire useful life of the project. 																
11.	Interest on Working Capital	Interest on Working Capital shall be at interest rate equivalent to the normative interest rate of three hundred (300) basis points above the average State Bank of India MCLR (One Year Tenor) prevalent during the last available six months for the determination of tariff.																
12.	Operation & Maintenance Expenses	<p>Normative O&M expenses allowed during first year of the Control Period (i.e., FY 2015-16) under these Regulations shall be escalated at the rate of 5.85% per annum over the Tariff Period.</p> <table border="1"> <thead> <tr> <th>Sl. No.</th> <th>RE Technology</th> <th>O & M Expenses (in Rs. Lakh/MW)</th> </tr> </thead> <tbody> <tr> <td rowspan="3">1.</td> <td>Biomass Power Plants based on Rankine Cycle</td> <td></td> </tr> <tr> <td>For water cooled condenser</td> <td>35.64</td> </tr> <tr> <td>For air cooled condenser</td> <td>38</td> </tr> <tr> <td>2.</td> <td>Biogas Power Plants</td> <td>47.27</td> </tr> <tr> <td>3.</td> <td>Biomass Gasifier based Power Plants</td> <td>47.27</td> </tr> </tbody> </table>	Sl. No.	RE Technology	O & M Expenses (in Rs. Lakh/MW)	1.	Biomass Power Plants based on Rankine Cycle		For water cooled condenser	35.64	For air cooled condenser	38	2.	Biogas Power Plants	47.27	3.	Biomass Gasifier based Power Plants	47.27
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13.	Rebate	<ol style="list-style-type: none"> For payment of bills of the generating company through letter of credit or by cash/cheque within three working days of presentation of bills, a rebate of 2% shall be allowed. If payments of bills of the generating company are made through letter of credit or by cash/cheque beyond three working days of presentation of bills but within thirty days of presentation of bills, a rebate of 1% shall be allowed. In case the payment of any bill is delayed beyond a period of 45 days from the date of presentation of bills, a late payment surcharge of 1.25% per month calculated on a daily basis shall be levied by the generating company. The rebate and late payment surcharge w.e.f. 1.4.2019 for payment of bills shall be as per provisions specified In RERC (Terms and Conditions for Determination of Tariff) Regulations, 2019 as amended from time to time). 																
14.	Sharing of CDM Benefits	The proceeds of carbon credit from approved CDM plants during the Control Period shall be shared in the ratio of 25:75 between the distribution licensee and generating company, respectively.																
15.	Subsidy or incentive by Central/State Government	<ol style="list-style-type: none"> The Commission shall take into consideration any incentive or subsidy or benefit available from Central or State Government, including accelerated or higher depreciation benefit, if availed by the generating company, for the renewable energy power plants while determining the tariff under these Regulations. 																

		2. If accelerated or higher depreciation benefit has been claimed despite submission of the undertaking, the distribution licensee shall be entitled to recover amount wrongly claimed along with penal charges @ 1.50 % per month calculated on daily basis.			
16.	Plant Load Factor	Sl. No.	RE Technology	PLF	
		1.	Biomass Power Plants based on Rankine Cycle		
			During stabilisation	60%	
			During first year after stabilisation	70%	
			From year-2 onwards	75%	
		2.	Biogas Power Plants	85%	
3.	Biomass Gasifier based Power Plants	85%			
17.	Auxiliary consumption	Sl. No.	RE Technology	Auxiliary consumption	
		1.	Biomass Power Plants based on Rankine Cycle	during stabilisation	after stabilisation
			For water cooled condensers	10.5%	10%
			For air cooled condensers	12.5%	12%
		2.	Biogas Power Plants	12%	
		3.	Biomass Gasifier based Power Plants	10%	
18.	Station Heat Rate	Sl. No.	RE Technology	Station Heat Rate (in kcal / kWh)	
		1.	Biomass Power Plants based on Rankine Cycle	during stabilisation	after stabilisation
			For water cooled condenser	4300	4200
			For air cooled condensers	4540	4440
19.	Calorific Value	Sl. No.	RE Technology	Calorific Value (In kCal/kg)	
		1.	Biomass Power Plants based on Rankine Cycle	3400	
20.	Fuel Price	Sl. No.	RE Technology	Fuel Price (in Rs./MT)	
		1.	Biomass Power Plants based on Rankine Cycle	2550	
		2.	Biogas Power Plants	1269	
		3.	Biomass Gasifier based Power Plants	2550	

21.	Use of Fossil Fuel	Biomass power generator in addition to fossil fuel may also use the solar power within the above limit of 15%.					
22.	Specific Fuel Consumption	Sl. No.	RE Technology			SFC(in kg/kWh)	
		1.	Biogas Power Plants			3	
		2.	Biomass Gasifier based Power Plants			1.25	
23.	Tariff for Plants under the REC mechanism	The tariff of projects set up under REC Mechanism shall be governed by the RERC (Renewable Energy Certificate and Renewable Purchase Obligation Compliance Framework) Regulations, 2010 and amendments thereto.					
24.	Grid Connectivity	<p>1. Grid connectivity charges of Rs. 2 Lakh per MW shall be payable by the Biomass, Biogas and Biomass Gasifier power plants to Transmission Licensee or Distribution Licensee, as the case may be.</p> <p>2. The power injection into the State Grid shall be limited to the capacity indicated below:</p>					
		S. No.	Total Power fed through a feeder (in MW)				
				11 kV	33 kV	132 kV	220 kV
		1.	ACSR Panther conductor	3 MW	12 MW	50 MW	-
		2.	ACSR Dog conductor	2 MW	6 MW	-	-
		3.	ACSR Raccoon conductor	1 MW	2 MW	-	-
		4.	ACSR Zebra	-	-	-	Above 50 MW & up to 150 MW
25.	Metering	In case of open access for Biomass, Biogas and Biomass Gasifier based power plants and in case of sale of electricity under REC mechanism, the metering for the purpose of accounting shall be at EHV substation of transmission licensee or HV station of distribution licensee as the case may be.					
26.	kVArh charges	Net kVArh drawal by generating plants from the Grid shall be billed at 12.50 paise / kVArh w.e.f 01.04.2015 escalated annually at 0.50 paise / kVArh, unless otherwise revised by the Commission by Order.					
27.	Transmission & wheeling charges	<p>In case of third party sale or for captive use both within the State or outside the State, the transmission charges and wheeling charges shall be recovered in cash and transmission losses and wheeling losses shall be recovered in kind as under:</p> <ul style="list-style-type: none"> For use of transmission network, transmission charges and losses as determined by the Commission in respect of open access transactions would be applicable. For use of distribution licensee's network, the wheeling charges and losses as determined by the Commission in respect of open access transactions at respective voltage levels at which electricity is supplied, would be applicable. For use of both EHV and distribution network, both transmission and wheeling charges as well as losses, as applicable, shall be payable. 					
28.	SLDC Fees and Charges	SLDC fees and charges shall be as specified in RERC (Levy of fee and charges by the State Load Despatch Centre) Regulations, 2004 as amended from time to time.					

29.	Surcharge	The Cross-subsidy surcharge as determined by the Commission from time to time shall not be applicable in case of open access transactions involving biomass, Biogas and Biomass Gasifier based power stations.
30.	Banking	<ol style="list-style-type: none"> 1. Energy shall be allowed to be banked at consumption end for only captive consumption within the State. 2. Energy Accounting: <ul style="list-style-type: none"> • If in any block injected energy is more than the energy drawn, the excess energy shall be computed. The excess energy of each time block shall be cumulated till the end of the month and shall be set off against the cumulative drawl of Discom energy in the same month. • For remaining excess injected energy, if any at the end of the month, the RE Power Generator/Developer would be entitled to get payment @60% of energy charges applicable for large industrial power tariff, excluding fuel surcharge, if any, in respect of 10% of unutilized banked energy after the end of the same month. Unutilized banked energy, in excess of 10% shall lapse. 3. The RE Generator shall raise the monthly bill and after raising bill, the Distribution Licensee shall make the payment within 30 days from date of receipt of bill, beyond which, the Late Payment Surcharge (LPS) at the rate of 1.25% per month, calculated on a daily basis would become applicable. 4. Banking charges at the rate of 2% of banked energy in each month would be payable in kind.