

CHHATTISGARH ELECTRICITY REGULATORY COMMISSION

(Terms and Conditions for Determination of Generation Tariff and Related Matters for Waste to Energy Projects) Regulations, 2016, Dated: 27-06-2016

Sl. No.	Description	Summary						
1.	Control Period or Review Period	5 yrs from the April 01, 2016 upto the 2020-21.						
2.	Tariff Period	Municipal solid waste and refuse derived fuel based power projects, the Tariff Period shall be twenty (20) years.						
3.	Tariff Structure	<p>1. The tariff for municipal solid waste based technologies shall be single-part tariff consisting of the following fixed cost components:</p> <ul style="list-style-type: none"> (a) Return on equity; (b) Interest on loan capital; (c) Depreciation; (d) interest on working capital; (e) Operation and maintenance expenses; <p>2. For RDF technologies having fuel cost component, single-part tariff with two components, viz., fixed cost component and fuel cost component, shall be determined.</p>						
4.	Tariff Design	<p>1. The generic tariff shall be determined on levelled basis for the Tariff Period.</p> <p>2. Levellisation shall be carried out for the 'useful life' of the renewable energy project while tariff shall be specified for the period equivalent to 'Tariff Period'.</p>						
5.	Discount Factor for Levellised Tariff	Discount factor for levelled tariff shall be equivalent to Post Tax weighted average cost of capital.						
6.	Dispatch Principles	Plants based on MSW/RDF shall be treated as 'MUST RUN' power plants and shall not be subjected to scheduling and merit order dispatch principles						
7.	Capital Cost	<p>Capital Cost inclusive of all capital work including plant and machinery, civil work, erection and commissioning, financing costs, preliminary and pre-operative expenses, interest during construction, and evacuation infrastructure up to inter-connection point.</p> <table border="1" style="width: 100%; margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Technology</th> <th style="text-align: center;">Capital Cost (in Rs Lakhs/MW)</th> </tr> </thead> <tbody> <tr> <td>Municipal solid waste based on Rankine cycle technology</td> <td style="text-align: center;">1575</td> </tr> <tr> <td>Refuse derived fuel based on Rankine cycle technology</td> <td style="text-align: center;">945</td> </tr> </tbody> </table>	Technology	Capital Cost (in Rs Lakhs/MW)	Municipal solid waste based on Rankine cycle technology	1575	Refuse derived fuel based on Rankine cycle technology	945
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8.	Debt Equity Ratio	<p>70:30</p> <p>For project specific tariff, If the equity actually deployed is more than 30 %of the capital cost, equity in excess of 30%o shall be treated as normative loan.</p>						
9.	Loan and Finance Charges	<p>Loan Tenure-12 Yrs</p> <p>For the purpose of computation of tariff, the normative interest rate shall be considered as average of base rate (lending rate) of State Bank of India prevalent on October 1st of the previous year of the tariff determination year plus 300 basis points.</p>						

10.	Depreciation	<p>1. The value base for the purpose of depreciation shall be the Capital Cost of the asset admitted by the Commission. The Salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the Capital Cost of the asset.</p> <p>2. The depreciation rate for the first 12 years of the Tariff Period shall be 5.83% per annum and the remaining depreciation shall be spread over the remaining useful life of the project from 13th year onwards on 'Straight Line Method'.</p>	
11.	Return on Equity	<p>1. The value base for the equity shall be 30% of the capital cost</p> <p>2. The normative Return on Equity shall be:</p> <ul style="list-style-type: none"> • 20% per annum for the first 10 years. • 24% per annum from 11th year onwards 	
12.	Interest on Working Capital	Interest on working Capital shall be at interest rate equivalent to base rate (lending rate) of State Bank of India prevalent on October 1 st of the previous year of the tariff determination year plus 350 basis points.	
13.	Operation & Maintenance Expenses	Normative O&M expenses allowed during first year of the control Period (i.e. FY 2016-17) under these Regulations shall be escalated at the rate of 5.72% per annum over the Tariff Period'	
		Technology	O&M Cost (in Rs. Lakhs/MW)
		Municipal solid waste based on Rankine cycle technology	94.5
		Refuse derived fuel based on Rankine cycle technology	56.5
14.	Rebate	<p>1. For payment of bills of the generating company through letter of credit, a rebate of 2% shall be allowed.</p> <p>2. Where payments are made other than through letter of credit within a period of one month of presentation of bills by the generating company, a rebate of 1% shall be allowed'.</p>	
15.	Late payment surcharge	Payment of any bill for charges payable under these regulations if delayed beyond a period of 60 days from the date of billing, a late payment surcharge at the rate of 1.25% per month shall be levied by the generating company.	
16.	Subsidy or incentive by the Central/State Government	The Commission shall take into consideration any capital subsidy/ incentive/grant offered by the Central or State Government, for the MSW/RDF plants while determining the project specific tariff under these Regulations.	
17.	Cess, Duties and Water charges/statutory charges	The cess and duties levied by the appropriate Government shall be allowed as pass through on actual incurred basis.	
18.	Capacity Utilisation factor/ Plant Load Factor	Technology	CUF/PLF
		Municipal solid waste based on Rankine cycle technology	75%
		Refuse derived fuel based on Rankine cycle technology	80%
19.	Auxiliary Consumption	15%	
20.	Station Heat Rate	4000 kcal/Wh	
21.	Calorific Value	2500 kca/kg	
22.	Fuel Cost	Refuse derived fuel price during FY 2016-17 shall be Rs 1,890 per MT. For each subsequent year of the Tariff Period, the normative escalation factor of 5% per annum shall be applicable at the option of the refuse derived fuel project developer.	