Bihar Electricity Regulatory Commission

(Terms and Conditions for Tariff Determination from Renewable Energy Resources) Regulations, 2017, Dated: 24.10.2017 with amendment Dated: 13.07.2018

<table>
<tr><th>Sl. No.</th><th>Description</th><th colspan="2">Summary</th></tr>
<tr><td>1.</td><td>Review Period/Control Period</td><td colspan="2">3 Years (FY 2017-18 being the first year)</td></tr>
<tr><td rowspan="9">2.</td><td rowspan="9">Tariff Period</td><td>RE Projects</td><td>Useful Life (Years)</td></tr>
<tr><td>Wind energy power project</td><td>25</td></tr>
<tr><td>Bio mass power project with Rankine cycle technology</td><td>20</td></tr>
<tr><td>Non-fossil fuel cogeneration project</td><td>20</td></tr>
<tr><td>Small Hydro Plant</td><td>35</td></tr>
<tr><td>Municipal Solid Waste (MSW)/ and Refuse Derived Fuel (RDF) based power project</td><td>20</td></tr>
<tr><td>Solar PV/Solar thermal power project</td><td>25</td></tr>
<tr><td>Biomass Gasifier based power project</td><td>20</td></tr>
<tr><td>Biogas based power project</td><td>20</td></tr>
<tr><td>3.</td><td>Tariff Structure</td><td colspan="2">The tariff for Projects based on RE technologies shall be a single-part tariff consisting of the following fixed cost components:
(a) Return on equity;
(b) Interest on loan capital;
(c) Depreciation;
(d) Interest on working capital;
(e) Operation and maintenance expenses;
For RE Projects based on technologies having a fuel cost component, like Biomass-based Power Projects and non-fossil fuel-based Co-Generation Projects, a single-part tariff with two components, viz., fixed cost component and fuel cost component, shall be determined.</td></tr>
<tr><td>4.</td><td>Despatch principles</td><td colspan="2">All RE Power Projects, except for Biomass-based Power Projects with installed capacity of 10MW and above and non fossil fuel based cogeneration plants shall be
• treated as ‘Must Run’ Projects and shall not be subjected to ‘merit order despatch’ principles.
• subjected to scheduling and despatch code</td></tr>
<tr><td>5.</td><td>Debt Equity Ratio</td><td colspan="2">• 70:30
• For project-specific tariff determination, if the equity actually deployed is more than 30% of the Capital Cost, the equity in excess of 30% shall be treated as normative loan.</td></tr>
<tr><td>6.</td><td>Loan Charges</td><td colspan="2">Loan Tenure-10Years</td></tr>
<tr><td>7.</td><td>Interest Rate</td><td colspan="2">200 basis points above the average State Bank of India MCLR (1-year tenor) prevalent during the last available six months</td></tr>
<tr><td>8.</td><td>Depreciation</td><td colspan="2">7.0% per annum for first 10 years and remaining depreciation to be spread during remaining useful life of the RE projects considering the salvage value of the project as 10% of project cost shall be considered.</td></tr>
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9.	**Return on Equity**	Value base for equity shall be 30% of the capital cost or actual equity and normative return on equity shall be 14% to be grossed up by prevailing MAT as on 1st April of previous year
10.	**Interest on Working Capital**	300 basis points above the average State Bank of India MCLR (1-year tenor) prevalent during the last available six months.
11.	**Rebate**	2% when payment is through letter of credit and 1% otherwise
12.	**Late Payment Surcharge**	A late payment surcharge at the rate of 1.25% per month if payment is delayed by 60 days
13.	**CDM Benefits**	a) 100% of the gross proceeds on account of CDM benefit to be retained by the project developer in the first year after the date of commercial operation of the generating station; b) In the second year, the share of the beneficiaries shall be 10% which shall be progressively increased by 10% every year till it reaches 50%, where after the proceeds shall be shared in equal proportion, by the generating company and the beneficiaries.
14.	**Subsidy**	The Commission shall take into consideration any grant, subsidy or incentive offered by the Central or State Government or their agencies, including accelerated/additional depreciation benefit, if availed, while determining the tariff under these Regulations.
15.	**Taxes and Duties**	Taxes and Duties levied by the government shall be allowed as passthrough on actual incurred basis and tariff determined shall be exclusive of taxes andduties

Sr. No.	Renewable Energy Source	Biomass Based Power Projects			Non-fossil fuel based Cogeneration Projects	Solar PV Power Project and Rooftop Solar PV Projects (<5 MW)	Solar Thermal Power Project (<5 MW)	Biomass Gasifier Power Projects	Municipal Solid Waste/refuse derived fuel and based on Rankine Cycle		
1.	**Auxiliary consumption**		Water cooled condenser	Air cooled condenser	8.5%	0.25%	10%	10%	15%		
		During 1st year of operation	11%	13%							
		from 2nd year onwards	10%	12%							
2.	**Calorific Value (kcal/kg)**	3174			2250	-	-	-	2500		
3.	**Capital Cost (lakh/MW)**	Projects [other than rice straw and juliflora (plantation) based projects] with water cooled condenser.		559.03	492.5	442.18	1200	592.88 (with subsidy of Rs 150.00 lakhs/MW, so net project cost shall be Rs. 442.88 Lakh/MW	MSW	1500	
		Projects [other than rice straw and juliflora (plantation)] based projects with air cooled condenser.		600.44							
		for rice straw and juliflora (plantation)] based projects with water cooled condenser.		610.80					RDF	900	
		for rice straw and juliflora (plantation)] based projects with air cooled condenser.		652.20							
4.	**Plant Load factor/CUF**	During Stabilization		60%	Based on 210 operating days and load factor of 92%	19%	23%	85%		MSW	DSW
		After stabilization till 1st year		70%					till 1st year	65%	65%
		from 2nd year onwards		80%					from 2nd year onwards	75%	80%

5.	**Station Heat Rate (kCal/kWh)**	Using travelling grate boilers	4200	3600	-	-		4200
		Using AFBC boilers	4125kCal/kWh					
6.	**O&M Expenses** (**lakh/MW**) (for FY 2017-18)**	For 1st year of control period	40	21.13	7.4	19.81	52.83	6% of Capital cost
7.	**Fuel Cost* (for FY 2017-18)**	3073.05/MT		1964.71/MT	-	-	3073.05/MT	1,800/MT Note: No fuel cost for MSW

* Normative escalation factor of 5% per annum for each subsequent year over tariff period.

** Normative escalation factor of 5.72% per annum for each subsequent year over tariff period.