

# MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

## (Terms and Conditions for Determination of Renewable Energy Tariff) Regulations, 2019, Dated: 30.12.2019

Sl. No.	Description	Summary																					
1.	<b>Control Period</b>	<ul style="list-style-type: none"> <li>The first Review Period under these Regulations shall be five (5) financial years (FY), from FY 2020-21 up to the end of FY 2024-25.</li> <li>At the end of the first Review Period, the Commission may, either extend the applicability of these Regulations for a further period with any modifications through Order, or decide to notify new Regulations for subsequent period.</li> </ul>																					
2.	<b>Applicability</b>	<ol style="list-style-type: none"> <li>These Regulations shall apply to those new RE Projects, which fulfil the following criteria: <ul style="list-style-type: none"> <li>are commissioned in the State of Maharashtra for the generation and sale of electricity to Distribution Licensees in the State;</li> <li>are Eligible Projects for the purposes of these Regulations; and</li> <li>whose tariff is to be determined by the Commission.</li> </ul> </li> <li>The tariff and other terms and conditions applicable to existing RE Projects shall be governed by the provisions of the applicable Regulations or RE Tariff Orders issued by the Commission from time to time.</li> </ol>																					
3.	<b>Tariff Period/Useful Life</b>	<table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Technology</th> <th>Tariff Period/ Useful Life</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Wind Energy Power Projects</td> <td>25 Years</td> </tr> <tr> <td>2.</td> <td>Biomass-based Power Project, Non-Fossil Fuel-based Co-Generation</td> <td>25 Years</td> </tr> <tr> <td>3.</td> <td>Mini/Micro and Small Hydro Power Projects</td> <td>35 Years</td> </tr> <tr> <td>4.</td> <td>Solar PV/Solar Thermal Power Projects</td> <td>25 Years</td> </tr> <tr> <td>5.</td> <td>Solar Roof-top PV Power Projects</td> <td>25 Years</td> </tr> <tr> <td>6.</td> <td>Hybrid RE Projects and other RE Projects</td> <td>25 Years</td> </tr> </tbody> </table>	Sl. No.	Technology	Tariff Period/ Useful Life	1.	Wind Energy Power Projects	25 Years	2.	Biomass-based Power Project, Non-Fossil Fuel-based Co-Generation	25 Years	3.	Mini/Micro and Small Hydro Power Projects	35 Years	4.	Solar PV/Solar Thermal Power Projects	25 Years	5.	Solar Roof-top PV Power Projects	25 Years	6.	Hybrid RE Projects and other RE Projects	25 Years
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4.	<b>Discount Factor</b>	For the purpose of computation of levelised tariff, a discount factor equivalent to the normative post-tax weighted average cost of capital shall be considered.																					
5.	<b>Scheduling and Despatch principles for electricity generated from RE Sources</b>	<ol style="list-style-type: none"> <li>The Biomass-based Power Projects and Co-Generation Projects shall be subject to the respective scheduling and despatch code as specified under the State Grid Code, as amended from time to time.</li> <li>The Wind Energy Power Projects and Solar PV Power Projects shall be subject to the MERC (Forecasting, Scheduling and Despatch of Solar and Wind Generation) Regulations, 2018, as amended from time to time.</li> <li>13.3 Subject to the provisions of the Indian Electricity Grid Code and the State Electricity Grid Code, all RE Power Projects shall be treated as 'Must Run' Projects and shall not be subjected to 'merit order despatch' principles.</li> </ol>																					
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7.	<b>Debt-equity Ratio</b>	<p>70:30</p> <ul style="list-style-type: none"> <li>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.</li> <li>If the equity actually deployed is less than 30% of the Capital Cost, the actual equity shall be considered for determination of tariff.</li> <li>The equity invested in foreign currency shall be denominated or designated in Indian rupees as on the date of each investment.</li> </ul>																					
8.	<b>Loan and Finance Charges</b>	1. Loan Tenure: 12 Years																					

		2. Interest Rate: For the purpose of computation of tariff, the average of the one-year Marginal Cost of Funds-based Lending Rate ('MCLR') as declared by the State Bank of India for the previous year plus 200 basis points, shall be considered as the normative interest rate.																														
9.	<b>Depreciation</b>	<ul style="list-style-type: none"> <li>The value base for the purpose of depreciation shall be the capital cost of the asset as admitted by the Commission.</li> <li>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, excluding the cost of freehold land, if any.</li> <li>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 the 13<sup>th</sup> year onwards.</li> </ul>																														
10.	<b>Return on Equity</b>	<ol style="list-style-type: none"> <li>The value base for the equity shall be 30% of the Capital Cost, or the actual equity (in case of project-specific tariff determination) as determined according to these Regulations.</li> <li>The Return on Equity shall be computed at the base rate of 14%, to be grossed up as per the Minimum Alternate Tax ('MAT') rate applicable as on 1st April of the previous Financial Year.</li> </ol>																														
11.	<b>Interest on Working Capital</b>	Interest on Working Capital shall be the average of the one-year Marginal Cost of Funds-based Lending Rate ('MCLR') as declared by the State Bank of India for the previous year plus 150 basis points.																														
12.	<b>Operation and Maintenance Expenses</b>	<table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Technology</th> <th>O &amp; M Expense (in Rs. Lakh/MW)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Wind Energy Power Projects</td> <td>7.72</td> </tr> <tr> <td rowspan="4">2.</td> <td>Mini/Micro and Small Hydro Power Projects</td> <td></td> </tr> <tr> <td>Up to 500 kW</td> <td>4.00% of the C.C.</td> </tr> <tr> <td>&gt; 500 kW and up to and including 1 MW</td> <td>4.00% of the C.C.</td> </tr> <tr> <td>&gt; 1 MW and up to and including 5 MW</td> <td>3.60% of the C.C.</td> </tr> <tr> <td></td> <td>&gt; 5 MW and up to and including 25 MW</td> <td>2.80% of the C.C.</td> </tr> <tr> <td>3.</td> <td>Biomass-based Power Project,</td> <td>5.32% of the C.C.</td> </tr> <tr> <td>4.</td> <td>Non-Fossil Fuel-based Co-Generation</td> <td>3.54% of the C.C.</td> </tr> <tr> <td>5.</td> <td>Utility-Scale Solar PV and Solar Rooftop PV</td> <td>6.00</td> </tr> <tr> <td>6.</td> <td>Solar Thermal Power Projects</td> <td>15.00</td> </tr> </tbody> </table>	Sl. No.	Technology	O & M Expense (in Rs. Lakh/MW)	1.	Wind Energy Power Projects	7.72	2.	Mini/Micro and Small Hydro Power Projects		Up to 500 kW	4.00% of the C.C.	> 500 kW and up to and including 1 MW	4.00% of the C.C.	> 1 MW and up to and including 5 MW	3.60% of the C.C.		> 5 MW and up to and including 25 MW	2.80% of the C.C.	3.	Biomass-based Power Project,	5.32% of the C.C.	4.	Non-Fossil Fuel-based Co-Generation	3.54% of the C.C.	5.	Utility-Scale Solar PV and Solar Rooftop PV	6.00	6.	Solar Thermal Power Projects	15.00
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13.	<b>Rebate</b>	<ul style="list-style-type: none"> <li>For payment of bills of the Project Entity through revolving and valid Letter of Credit, a rebate of 2% shall be allowed.</li> <li>Where payments are made other than through Letter of Credit within seven days of presentation of bills by the Project Entity, a rebate of 1% shall be allowed.</li> </ul>																														
14.	<b>Late Payment Surcharge</b>	In case the payment of any bill for charges payable under these Regulations is delayed beyond a period of 30 days from the date of billing, Late Payment Surcharge on simple interest basis at the one-year MCLR as declared by the State Bank of India as on 1 <sup>st</sup> of the respective month plus 350 basis points per annum on the billed amount, shall be levied for the period of delay by the Project Entity.																														
15.	<b>Sharing of Clean Development Mechanism (CDM) Benefits</b>	All risks, costs and efforts associated with the availing of carbon credits shall be borne by the Project Entity, and the entire proceeds of carbon credit from approved CDM Project, if any, shall be retained by it.																														
16.	<b>Reactive Energy Charges</b>	The Reactive Energy Charges will be governed by general or specific Orders issued by the Commission from time to time, or as may be specified by the Commission in future.																														
17.	<b>Grant, Subsidy or Incentive from the Central/State Government</b>	<ol style="list-style-type: none"> <li>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.</li> <li>In case the Central or State Government or their agencies provide any generation-based incentive, which is specifically over and above the tariff, such incentive shall neither be taken into account while determining the tariff nor be deducted by the Distribution Licensee in subsequent bills raised by the particular Project Entity.</li> </ol>																														
18.	<b>Taxes and Duties</b>	The taxes and duties levied by the appropriate Government on generation, and sale of electricity from such RE Project, such as Electricity Duty and Water Royalty, shall be allowed as a pass-through to the extent actually incurred																														

19.	Capacity utilization Factor/Plant Load factor	SI. No.	Technology	CUF/PLF
		1.	Wind Energy Power Projects	30%
		2.	Mini/Micro and Small Hydro Power Projects	30%
		3.	Biomass-based Power Project	
			During stabilisation	60%
			During the remaining period of the first year (after stabilisation)	70%
			From 2 <sup>nd</sup> year onwards	80%
		4.	Non-Fossil Fuel-based Co-Generation	60%
5.	Utility-Scale Solar PV	28%		
6.	Solar Thermal Power Projects	23%		
20.	Auxiliary Consumption	SI. No.	Technology	Auxiliary Consumption
		1.	Mini/Micro and Small Hydro Power Projects	1.0%
		2.	Biomass-based Power Project	10%
		3.	Non-Fossil Fuel-based Co-Generation	8.5%
		4.	Solar Thermal Power Projects	10%
21.	Station Heat Rate	SI. No.	Technology	SHR (kcal/kWh)
		1.	Biomass-based Power Project	4200
		2.	Non-Fossil Fuel-based Co-Generation	3600
22.	Calorific Value	SI. No.	Technology	CV (kcal/kg)
		1.	Biomass-based Power Project	3100
		2.	Non-Fossil Fuel-based Co-Generation	2250
23.	Fuel Price	SI. No.	Technology	FP
		1.	Biomass-based Power Project	Prevailing Prices
		2.	Non-Fossil Fuel-based Co-Generation	Prevailing Prices