

NAGALAND ELECTRICITY REGULATORY COMMISSION

(Terms and Conditions for Determination of Generation Tariff for Renewable Energy) Regulations, 2011, Dated: 30-08-2011

Sl. No.	Description	Summary		
1.	Eligibility Criteria	For the purposes of these regulations, generation from all types of Renewable Energy Sources and non-fossil fuel based Co-generating Plants, as approved by Ministry of New and Renewable Energy (MNRE), Government of India. shall be considered.		
2.	Open Excess	<ol style="list-style-type: none"> 1. Open access in State Transmission/Distribution System shall be allowed to all RE based Generating stations and Co-generating Stations for captive use, which shall be subject to provisions of these regulations. 2. Open access to State distribution system shall be subject to payment of wheeling charges and adjustment of average distribution losses in kind as determined by the Commission. 		
3.	Control Period/Review Period	3-years (starting from the date of commencement)		
4.	Tariff Period	Sl No.	Technology	Tariff Period (in Years)
		1.	hydro projects below 5 MW and Mini/Micro Hydro projects	35
		2.	Solar PV, Solar thermal power projects, Solar rooftop PV and other small Solar power projects	25
		3.	Biomass, Biogas, MSW	13
5.	Tariff Structure	<ol style="list-style-type: none"> 1. The tariff for renewable energy technologies shall be single-part tariff consisting of the following fixed cost components: <ol style="list-style-type: none"> (a) Operation and maintenance expenses; (b) Depreciation; (c) Interest on loan capital; (d) Interest on working capital; (e) Return on equity; 2. Renewable energy technologies having fuel cost component, like biomass power projects and non-fossil fuel based co-generation projects, single-part tariff with two components, viz., fixed cost component and fuel cost component, shall be determined. 		
6.	Tariff Design	<ol style="list-style-type: none"> 1. The tariff shall be determined on levellised basis for the Tariff Period. 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'. 		

7.	Despatch Principals	<p>1. All renewable energy power plants except for biomass power plants with installed capacity of 10 MW and above and non-fossil fuel based co-generation plants shall be treated as 'MUST RUN' power plants and shall not be subjected to 'merit order despatch' principles.</p> <p>2. The biomass power generating station with an installed capacity of 10 MW and above and non-fossil fuel based co-generation projects shall be subjected to scheduling.</p>			
8.	Capital Cost	<p>Capital Cost shall be inclusive of all capital works including plant and machinery, civil works, erection and commissioning, financing costs, preliminary and pre-operative expenses, and interest during construction, and evacuation infrastructure up to inter-connection point.</p>			
		Sl. No	Renewable Energy Source	Project Size	Capital Cost (Rs. Lakh/MW)
		1.	Wind Energy	-	467/
		2.	Small Hydro Project	Below 5 MW	635
				5 MW to 25 MW	571
		3.	Biomass Rankine Cycle Projects	using water cooled condenser	403
		4.	Non-fossil fuel based Cogeneration Projects	-	398
		5.	Solar PV Power Project	-	1690
		6.	Solar Thermal Power Project	-	1530
9.	Debt Equity Ratio	<p>70:30 If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan.</p>			
10.	Interest Rate on Loan Capital	<p>1. For the purpose of computation of tariff, the normative interest rate shall be considered as average long term prime lending rate (LTPLR) of State Bank of India (SBI) prevalent during the previous year plus 150 basis points.</p> <p>2. Normative period of loan repayment shall be considered as 10 years.</p>			
11.	Depreciation	<p>The depreciation rate for the first 10 years of the Tariff Period shall be 7% per annum and the remaining depreciation shall be spread over the remaining useful life of the project from 11th year onwards.</p>			
12.	Return on Equity	<p>The normative Return on Equity shall be:</p> <p>(a) Pre-tax 19% per annum for the first 10 years.</p> <p>(b) Pre-tax 24% per annum 11th year onwards</p>			
13.	Operation and Maintenance Expenses	<p>Normative O&M expenses allowed during first year of the Control Period (i.e. FY 2010-11) under these Regulations shall be escalated at the rate of 5.72% per annum over the Tariff Period.</p>			
		Sl. No	Renewable Energy Source	Project Size	O&M Expense (Rs. Lakh / MW)
		1.	Wind Energy		6.67
		2.	Small Hydro Project	Below 5 MW	22.20

				5 MW to 25 MW	15.86	
		3.	Biomass Power Projects based on Rankine Cycle Technology		21.41	
		4.	Non-fossil fuel based Cogeneration Projects		14.11	
		5.	Solar PV Power Project		9.00	
		6.	Solar Thermal Power Project		13.00	
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	In case the payment of any bill for charges payable, delayed beyond a period of 60 (sixty) days from the date of billing, at the rate of 1.25% per month shall be levied by the generating company.				
16.	Subsidy or Incentive	The Commission shall take into consideration any incentive or subsidy offered by the Central or State Government, including accelerated depreciation benefit if availed by the generating company, for the renewable energy power plants.				
17.	Interest on Working Capital	Interest on Working Capital shall be at interest rate equivalent to average State Bank short term PLR (SBAR) during the previous year plus 100 basis points.				
18.	Sharing of CDM Benefits	<p>1. 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;</p> <p>2. 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.</p>				
19.	Taxes and Duties	The taxes and duties levied by the appropriate government shall be allowed as pass through on actual incurred basis.				
20.	Capacity Utilisation Factor/Plant Load Factor	Sl. No	Region	Renewable Energy Source	Project Size	CUF/PLF
		1.		Wind Power (Density (W/m ²))	200-250	20 %
					250-300	23 %
					300-400	27 %
					Above 400	30 %
		2.		Small Hydro Project		30%
		3.	During Stabilisation	Biomass Power Projects based on Rankine Cycle Technology	60%	
During the remaining period of the	70%					

			first year (after stabilization):			
			From 2 Year onwards			80%
		4.		Non-fossil fuel based Cogeneration Projects		53%
		5.		Solar PV Power Project		19%-21%
		6.		Solar Thermal Power Project		23%
21.	Auxiliary Consumption	Sl. No	Renewable Energy Source			Auxiliary Consumption
		1.	Small Hydro Project			1.0%
		2.	Biomass Power Projects based on Rankine Cycle Technology			10%
		3.	Non-fossil fuel based Cogeneration Projects			8.5%
		4.	Solar Thermal Power Project			10%
22.	Station Heat Rate	RE Technology			Quantity	
		Biomass based Power Projects			3800 kcal/kWh	
		Non-fossil Fuel based Cogeneration Power Projects			3600 kcal/kWh	
23.	Calorific Value	RE Technology			Quantity	
		Biomass based Power Projects			3467 kcal/kg	
		Non-fossil Fuel based Cogeneration Power Projects			2250 kcal/kg.	
24.	Fuel Cost	RE Technology			Quantity	
		Biomass based Power Projects			1855 Rs/MT	
		Non-fossil Fuel based Cogeneration Power Projects (Bagasse)			1221 Rs/MT	