

**Joint Electricity Regulatory Commission for Manipur and Mizoram
(Terms and Conditions for Tariff determination
from Renewable Energy Sources) Regulations, 2010**

HIGHLIGHTS

Tariff Period	<ul style="list-style-type: none">• 35 years for small hydro under 5 MW.• 25 years for solar PV and solar thermal.• 13 years for wind energy, small hydro (5 MW-25 MW), biomass, non-fossil fuel generation, biomass gasifier and biogas.
Control Period	5 years of which the first year is FY 2012-13.
Useful Life of a Plant	<ul style="list-style-type: none">• 35 years - small hydro.• 25 years - solar PV, solar thermal and wind energy.• 20 years - biomass gasifier, biogas, biomass Rankine cycle, non-fossil fuel cogeneration plants.

**Technology-wise Tariff
(2014-15)**

Technology	Net Tariff (Rs./kWh)	Net Tariff with Accelerated Depreciation (Rs./kWh)
Wind zone 1 (CUF - 20%)	6.34	5.66
Wind zone 2 (CUF - 22%)	5.76	5.14
Wind zone 3 (CUF - 25%)	5.07	4.52
Wind zone 4 (CUF - 30%)	4.23	3.77
Wind zone 5 (CUF - 32%)	3.96	3.53
Small hydro below 5 MW	4.46	4.10
Small hydro 5 MW to 25 MW	3.80	3.47
Solar PV	7.72	6.95
Solar thermal	11.88	10.65
Biomass using other than rice straw and juliflora, and travelling grate boiler with water cooled condenser.	7.42	7.25
Biomass using other than rice straw and juliflora, and travelling grate boiler with air cooled condenser.	Not available	Not available
Biomass using other than rice straw and juliflora, and AFBC boiler with water cooled condenser.	Not available	Not available
Biomass using other than rice straw and juliflora, and AFBC boiler with air cooled condenser.	Not available	Not available--
Non-fossil fuel based cogeneration	5.94	5.73
Biomass gasifier	6.55	6.42
Biogas	7.40	7.16

Capital Cost	Technology	Capital Cost (FY 14-15) (Rs. lakh/MW)
	Wind	603.93
	Small hydro below 5 MW	808.74
	Small hydro (5 MW to 25 MW)	735.21
	Biomass projects based on Rankine cycle technology (with water cooled condenser and using other than rice straw and juliflora).	544.19
	Biomass projects based on Rankine cycle technology (with water cooled condenser, using rice straw and juliflora).	594.57
	Biomass based on Rankine cycle technology (with air cooled condenser and using other than rice straw and juliflora).	584.50
	Biomass based on Rankine cycle technology (with air cooled condenser, using rice straw and juliflora).	634.88
	Non-fossil fuel cogeneration	440.71
	Solar PV	691.00
	Solar thermal	1200.00
	Biomass gasifier	577.12
	Biomass gasifier (after considering capital subsidy).	427.12
	Biogas	1154.20
	Biogas (after considering capital subsidy).	854.24
	All capital costs (in Rs. lakh/MW) are for FY 2014-15 and shall be linked to respective indexation formula.	

	Technology	Cost (FY 2014-15) (in Rs. lakh)
Operation and Maintenance Expenses (O&M)	Wind	10.05
	Small hydro below 5 MW	27.94
	Small hydro (5 MW to 25 MW)	20.12
	Biomass based on Rankine cycle technology.	42.29
	Non-fossil fuel based cogeneration.	17.89
	Solar PV	12.30
	Solar thermal	16.77
	Biomass gasifier and biogas	44.71
	5.72% p.a. escalation allowed.	
	Interest Rate on Loans	Average State Bank of India(SBI) base rate prevalent during first six months of the previous year plus 300 basis points.
Depreciation	5.83% for first 12 years and remaining depreciation spread over residual useful life of the project.	
Return on Equity	<ul style="list-style-type: none"> • The value base for equity is 30% of the capital cost or actual equity. • 20% per annum for first 10 years. • 24% per annum from 11th year onwards. 	
Interest on Working Capital	Equivalent to the average State Bank of India base rate prevalent during the first six months of the previous year plus 350 basis points.	

OTHER PROVISIONS

Tariff structure and design	Single part, levellised tariff for the tariff period, except for technologies with fuel cost component.
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Merit Order Dispatch Principle	<ul style="list-style-type: none"> • All renewable energy power plants except for biomass power plants with installed capacity of 10 MW and above, and non-fossil fuel based cogeneration plants, shall be treated as 'Must Run' power plants and shall not be subjected to 'merit order dispatch' principles. • Wind power plant with 10MW+, solar with 5MW+, biomass with 10 MW+ capacity, and non-fossil fuel based co-generation projects, shall be subjected to scheduling and dispatch code as specified under Indian Electricity Grid Code (IEGC) and CERC regulations
Subsidy or/and Incentives by government	Any incentive or subsidy provided by the central or state government including accelerated depreciation benefit would be taken into consideration.
Rebate	<ul style="list-style-type: none"> • 2% - for payment through letter of credit. • 1% - for payments not through letter of credit but within 1 month from the date of presentation of bills.
Late payment surcharge	1.25% per month for payment of bills beyond a period of 60 days from the date of billing.
Links	https://jerc.mizoram.gov.in/page/various-regulations-under-jerc-for-manipur-mizoram.html
References	<p>JERC for Manipur & Mizoram (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2010: https://jerc.mizoram.gov.in/downloads/file/217</p> <p>First Amendment : https://jerc.mizoram.gov.in/downloads/file/250</p> <p>Generic RE Tariff Order https://jerc.mizoram.gov.in/downloads/file/175</p>