

# JHARKHAND STATE ELECTRICITY REGULATORY COMMISSION

## (Determination of Tariff for Procurement of Power from Solar PV Power Project and Solar Thermal Power Project) Regulations, 2015 Dated: 10-11-2015 (Notification-51)

Sl. No.	Description	Summary			
1.	Control Period/Review period	4-Years (1 <sup>st</sup> April 2016 to 31 <sup>st</sup> March 2020).			
2.	Tariff Period	Sl. No.	RE Technology		Tariff Period (upto 31 <sup>st</sup> March 2020)
		1.	Solar PV Projects		25 Years
		2.	Solar thermal Power Projects		25 Years
3.	Tariff Structure	<p>1.Components for tariff determination</p> <ul style="list-style-type: none"> <li>(a) Capital cost;</li> <li>(b) Plant Load Factor/ Capacity Utilisation Factor;</li> <li>(c) Auxiliary consumption;</li> <li>(d) Debt-equity ratio ;</li> <li>(e) Term of loan and Interest on long term debt;</li> <li>(f) Depreciation;</li> <li>(g) Operation and Maintenance expenditure;</li> <li>(h) Working capital and interest on working capital</li> <li>(i) Return on equity.</li> </ul> <p>2. The subsequent sections detail the terms and conditions of various components set by the Commission for determination of tariff from the solar PV and solar thermal power projects.</p>			
4.	Discount Factor for Levellised Tariff	Discount factor shall be equivalent to Post tax weighted average cost of capital.			
5.	Capital Cost	Sl. No.	Year	RE Technology	Capital Cost (in LAKh/MW)
		1.	2015-16	Solar PV Projects	605.85
		2.	2015-16	Solar thermal Power Projects	1200.00
6.	Capacity Utilisation Factor/Plant Load Factor	Sl. No.	RE Technology		CUF/PLF
		1.	Solar PV Projects		19%
		2.	Solar thermal Power Projects		23%
7.	Auxiliary Consumption	Sl. No.	RE Technology		Auxiliary consumption Factor
		1.	Solar PV Projects		
		2.	Solar thermal Power Projects		10%
8.	Debt Equity Ratio	<p>70:30</p> <p>If the equity actually employed is more than 30%, the amount of equity in excess of 30% shall be treated as normative loan.</p>			

9.	<b>Loan and Interest Rate</b>	Loan Tenure-12 years The normative interest rate on long term loan shall be considered as average State Bank of India (SBI) Base rate prevalent during the first six months of the previous year plus 300 basis points.		
10.	<b>Depreciation</b>	<ol style="list-style-type: none"> <li>1. 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.</li> <li>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.</li> <li>3. Depreciation shall be chargeable from the first year of commercial operation.</li> </ol>		
11.	<b>Operation and Maintenance expenses</b>	<b>Sl. No.</b>	<b>RE Technology</b>	<b>O&amp;M Cost (in RS Lakh/MW)</b>
		1.	Solar PV Projects	11.88
		2.	Solar thermal Power Projects	17.16
		Normative O&M expenses allowed at the commencement of the Control Period under the Regulations i.e. FY 2016-17 shall be escalated at the rate of 5.72% per annum.		
12.	<b>Interest on working capital</b>	Interest on Working Capital shall be at interest rate equivalent to the average State Bank of India Base Rate prevalent during the first six months of the previous year plus 350 basis points.		
13.	<b>Return on equity</b>	<ol style="list-style-type: none"> <li>1. The value base for the equity shall be 30% of the capital cost.</li> <li>2. The return on equity (pre-tax) shall be as under : <ol style="list-style-type: none"> <li>(a) 20% per annum for the first 10 years.</li> <li>(b) 24% per annum 11th years onwards</li> </ol> </li> </ol>		
14.	<b>Wheeling Charges</b>	To promote investment in solar PV and solar thermal power projects and encourage third party sale and Captive Power Plants, a 50% discount on wheeling charges and other surcharge on wheeling charges applicable to conventional form of generation shall be applicable for solar PV and solar thermal power projects in Jharkhand.		
15.	<b>Despatch principles</b>	<ol style="list-style-type: none"> <li>1. The solar PV and solar thermal power projects with installed capacity of 10 MW and above shall be treated as 'MUST RUN' power plants and shall not be subjected to 'merit order despatch' principles.</li> <li>2. Solar generating plants with capacity of 5 MW and above and connected at the connection point of 33 KV level and above shall be subjected to scheduling and despatch as amended from time to time.</li> </ol>		
16.	<b>Drawing of power during shut down</b>	The solar PV and solar thermal power generator shall be entitled to draw power from the Distribution Licensee's network during shutdown period of its plant or other emergencies. The energy consumed shall be billed at the temporary rate applicable to HT Industrial category. The drawal by the solar PV and solar thermal power generator shall not normally exceed 11.5 % of the MW capacity it delivers to the Distribution Licensee.		
17.	<b>Banking</b>	Banking of 100% energy shall be permitted for all Captive and Open Access/Scheduled Consumers during all 12 months of the year. Banking charges shall be adjusted in kind @2% of the energy delivered at the point of drawal.		
18.	<b>Evacuation Infrastructure</b>	Transco/Discom shall bear the entire cost of construction of power evacuation facilities from the project's generator switchyard to the interconnection point (injection point), up to a maximum length of 10 KM. State govt. shall reimburse such cost to the concerned Transco/Discom provided the project capacity is 2MW or more. Beyond 10 KM, the cost shall be borne by the project developer.		

19.	<b>Sharing of CDM Benefits</b>	<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>
20.	<b>Subsidy</b>	<p>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 while determining the tariff under these Regulations.</p>
21.	<b>Taxes and Duties</b>	<p>The taxes and duties levied by the government shall be allowed to pass through on actual incurred basis.</p>