

BIHAR ELECTRICITY REGULATORY COMMISSION

Terms and conditions for Tariff determination from Solar Energy Sources Regulation 2010

Notification dated 02.8.2010, 7.9.2012, 28.3.2014 and 1.7.2014

Sl.No	Description	Summary
1	Title	Terms and conditions for Tariff determination from Solar energy sources Regulation 2010 dated 2.8.2010 1st Amendment Regulations-2012 dated 7.9.2012 2nd Amendment Regulations-2014 dated 28.3.2014 3rd Amendment Regulations-2014 dated 1.7.2014
2	Date of enforcement	Regulations to come into force from the date of their publication in the official Gazette
3	Scope and extent of application	Shall apply to all cases of solar energy projects for generation and sale of electricity to distribution licensee within the State of Bihar from the date of Notification of Regulations
4	Eligibility criteria	Both Solar PV and Solar Thermal Projects based on technologies as approved by the MNRE, Govt. of India
5	Control Period or Review Period	3 years with first year to be from the date of notification of Regulations up to March 31, 2011
6	Tariff period	Solar PV and Solar Thermal Power- 25 years from the date of commercial operation
7	Project Specific Tariff	To be determined by the Commission on case to case basis for the following projects: (a) Solar PV and Solar Thermal Power Projects, if project developer opts. (b) Hybrid Solar Thermal Power Projects
8	Tariff Structure	Tariff to be Single part tariff consisting of the following fixed cost components: <ul style="list-style-type: none"> • Return of equity • Interest on loan capital • Depreciation • Interest on working capital • Operation and maintenance expenses
9	Tariff Design	<ul style="list-style-type: none"> • The generic tariff to be determined on levelised basis for the tariff period • For the purpose of levelised tariff computation, the discount factor equivalent to weighted average cost of capital to be considered. • Levelisation to be carried out for the 'useful' life of the Solar PV and Solar Thermal power projects while tariff to be specified for the period equivalent to 'Tariff period'
10	Dispatch principles	All solar energy power plants to be treated as 'MUST RUN' power plants and not to be subjected to 'merit order' dispatch principle.
11	Capital Cost	(a) Solar PV, Rooftop Solar PV and other small Solar : Rs. 1690 lakh/MW for FY 2010-11 (b) Solar Thermal: Rs. 1530 lakh/MW for FY 2010-11 Commission may deviate for project specific Tariff
12	Debt Equity Ratio	70 : 30 For project specific Tariff : In case equity is more than 30% of the capital cost, equity in excess of 30% to be treated as normative loan
13	Loan and Finance charge (a) Loan tenure (b) Interest Rate	10 years Normative interest rate shall be considered as average long term PLR of SBI during previous year plus 150 basis point

14	Depreciation	7% per annum for the first 10 years. Remaining depreciation to be spread over remaining useful life of the project from 11 th year onwards
15	Return of equity	19% for 1 st 10 yrs, 24% from 11 th year onwards (Pretax)
16	Interest on working capital (IWC)	(a) The working capital in respect of Solar PV and Solar Thermal Power project computed as: - Operation & Maintenance expenses for one month - Receivable equivalent to 2 months energy for sale of electricity - Maintenance spare @15% O&M expenses (b) IWC shall be at Interest rate equivalent to average SBI short term PLR plus 100 basis point
17	Operation & Maintenance expenses	<ul style="list-style-type: none"> O&M expenses shall be determined for the tariff period based on the normative O&M expenses specified by the Commission for first year of control period. Normative O&M expenses allowed during first year of control period i.e. FY 2010-11 shall be escalated @ 5.72% per annum over the tariff period. Normative O&M expenses for first year of operation shall be: <ul style="list-style-type: none"> Solar PV , Rooftop Solar PV & Small Solar- Rs. 9.51 lakhs / MW Solar Thermal - Rs. 13.74 lakhs / MW
18	Rebate	<ul style="list-style-type: none"> Payment of bill through letter of credit, a rebate of 2% to be allowed Payment other than through letter of credit within a period of one month of presentation of bill a rebate of 1% to be allowed
19	Late payment surcharge	Payment of any bill delayed beyond a period of 60 days from the date of billing, a late payment surcharge @1.25% per month to be levied by the generating company.
20	Sharing of Clean Development Mechanism (CDM) benefits	Proceeds of carbon credit to be shared as follows: (a) 100% by project developer in the first year after the date of commercial operation of the generating station (b) 2 nd year – share of beneficiaries @10% to progressively increase by 10% every year up to 50% and then to be shared in equal proportion by the generating company and the beneficiaries
21	Subsidy or incentive by the Central / State Government	The Commission to 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 solar power plants while determining the tariff.
22	Taxes and Duties	<ul style="list-style-type: none"> Tariff to be exclusive of taxes and duties as may be levied by the appropriate Government. To be allowed as pass through on actual incurred basis.
23	Technology Norms	Solar PV Power Projects Solar PV, Rooftop Solar PV, and other Small Solar power projects under this regulation to be applicable to grid connected PV system that directly convert solar energy into electricity and are based on the technologies such as crystalline silicon or thin film etc. as may be approved by MNRE. Solar Thermal Power Projects To be applicable for concentrated solar power (CSP) technologies viz. line focusing or point focusing as may be approved by MNRE and uses direct sun light
24	Capacity Utilization Factor (%) (CUF)	(a) Solar PV, Rooftop Solar PV and other small Solar : 19% (b) Solar Thermal: 23%
25	Auxiliary consumption for Solar Thermal	10%
26	Deviation from norms	Tariff for sale of electricity by the generating company may be determined in deviation from the norms specified in these regulations subject to the condition that the levelised tariff over the useful life of the project on the basis of the norms in deviation does not exceed the levelised tariff calculated on the basis of norms specified in these regulations.

27	Power Purchase Agreement (PPA)	<ul style="list-style-type: none"> Utility before signing PPA with Solar Power Developer to satisfy the eligibility criteria as decided by MNRE under JNNSM Qualification criteria under clause 2.5(D) Domestic content in Section 2 of the 'GUIDELINES FOR SELECTION OF SOLAR PV PROJECTS' under JNNSM regarding mandatory provision for use of cells and modules manufactured in India shall not be applicable for PV projects not covered under JNNSM 								
28	Renewable Purchase Obligation (RPO)	Purchase of electricity by the distribution licensee from renewable and co-generation sources as per guidelines of MNRE in the following percentage of its total energy consumption in a year.								
		<table border="1"> <thead> <tr> <th>Year</th> <th>Minimum Percentage</th> </tr> </thead> <tbody> <tr> <td>2010-11</td> <td>1.5%</td> </tr> <tr> <td>2011-12</td> <td>2.5%</td> </tr> <tr> <td>2012-13</td> <td>4.0%</td> </tr> </tbody> </table>	Year	Minimum Percentage	2010-11	1.5%	2011-12	2.5%	2012-13	4.0%
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RPO from Solar Energy Sources for FY 2012-13 shall be 0.25% of consumption out of above RPO and shall increase by 0.25% every year thereafter till 2019-20 and by 0.5% in 2020-21 and 2021-22										
29	Banking	To be provided by Bihar State Power Holding Co. Ltd (BSPHCL)/Distribution licensee for captive use, group captive use and for third party sale								
(i)	Banking charges	2% of the energy fed into the Grid								
(ii)	Banking Facility	<ul style="list-style-type: none"> Available for full calendar year and to be used in the same calendar year BSPHCL/Distribution licensee to pay for the unused energy during the calendar year at average cost purchase cost of BSPHCL/Distribution licensee during that calendar year Drawl of Banked energy shall not be permitted during peak hours 								
30	Metering	Metering facility to be provided by the Distribution licensee at consumers end								
31	Open Access	In case of third party sale the transmission/distribution licensee or SLDC to provide open access within 30 days of application. Open access charges to be paid as determined by the commission in addition to banking charges.								
32	Wheeling/Transmission and T&D losses	To be paid as determined by the commission								
33	Cross subsidy surcharge	Exempted								
34	Drawl of Power without PPA	Developer having no PPA for supply of Power with DISCOM during shutdown/maintenance of the plant at UI rates plus 5% of maximum UI rates or applicable rate for purchase of power from RE sources, whichever is higher.								
35	Guidelines of competent Authority	Policy / guidelines issued by Ministry of Power, Govt. of India, MNRE, State Govt. and any other competent Authority in this regard shall prevail								
36	Power to relax	Power vested with the commission								
37	Power to Remove Difficulties	Power vested with the commission								
38	Power to Amend	Power vested with the commission e								