

RAJASTHAN ELECTRICITY REGULATORY COMMISSION

(Benchmark Capital Cost for Solar PV and Solar Thermal Power Projects applicable during 2014-15 and Resultant Generic Levelled Tariff)

Order dated 21-08-2014

Sl. No.	Capital Cost	Summary
1.	Title	RERC Benchmark Capital Cost for Solar PV and Solar Thermal Power Projects applicable during 2014-15 and Resultant Generic Levelled Tariff)- Order dated 21-08-2014
2	Capital Cost	
	(i) Cost of Solar PV modules	Rs. 359.72 lakh/MW reduced by 3.30 lakhs.
	(ii) Land Cost	Rs 12 lakh/MW
	(iii) Transmission Network Cost	Rs. 15 lakh/MW
	(iv) Capital Cost Norm for Solar PV and Solar thermal Power	Rs. 6.73 Cr/MW for Solar PV Plants and Rs. 11.95 Cr./MW for Solar Thermal Power Plants These includes connectivity charges of Rs.2lakh/MW and Rs.15 lakh/MW towards solar energy evacuation cost
3.	MAT/Tax Rate	<ul style="list-style-type: none"> • MAT rate 20.01% (18.50% MAT rate + 5% Surcharge + 3% Cess) for first year, MAT rate of 19.06% (18.50% MAT rate + 3% Cess) for remaining 9 years of the first 10 years and for remaining 15 years of useful life normal tax rate of 30.90% (30% Tax rate + 3% Cess) has been applied for grossing up the base rate of Return on Equity. • Similarly for determination of levelised benefit for higher depreciation, Commission has considered tax rate of 32.45% (30% Tax rate + 5% surcharge + 3% Cess) for the first year and 30.90% (30% tax rate + 3% Cess) for subsequent years. • Surcharge of 5% has been considered for first year only.
4.	Tariff Levelisation	<ul style="list-style-type: none"> • Levelised tariff has been worked out by discounting the revenue stream and generation separately • NPV of the revenue stream with levelised tariff is same as the NPV of revenue stream of yearwise calculated tariff stream.
5.	Discount Rate	13.1%
6.	Accelerated Depreciation benefit	Depreciation 5.83% of Capital cost/pa for first 12 years and the remaining depreciation spread over the remaining useful life from 13 th year onward.
7.	Application of Deration	Deration of 0.5% to the CUF of every year for Solar PV Plants from 2 nd year and 0.25% for Solar thermal plants after 4 th year.
8.	Subsidy or incentive by the State/Central Govt.	<ul style="list-style-type: none"> • Any incentive or subsidy benefits available from Central or State Govt. including accelerated or higher depreciation benefits if availed by the generating Co. shall be considered for determining the tariff. • Commission has specified two generic tariff streams – with and without availing AD benefits.
9.	Applicability Conditions of Tariff	Tariff applicable to all Solar Power Plants for which PPA is signed on or before 31-03-2016 in case of Solar PV Plants and to be commissioned on or before 31-03-2017 in case of Solar thermal power plants.
10.	Tariff applicable to Roof top and Small Solar PV and Thermal Systems	Tariff applicable to MW Scale Solar power plants is same as to small Rooftop and small Solar power plants

11.	Grid Connectivity of rooftop PV power plants and Small Solar Power Plants.	The Grid connectivity of Rooftop PV systems and small systems shall be governed by the prevailing CEA(Technical Standards for connectivity of the Distributed Generation Resources) Regulations-2013 and Rajasthan Electricity Grid Code as amended from time to time.																								
12.	Generic levelled Generation tariff for Solar Power Plant	<p>The proposed levelled generic tariff for Solar Power Plants for FY 2014-15 has been based on</p> <p>(i) Useful Life 25 years for Solar PV/Solar Thermal Power Plant</p> <p>(ii) Tariff Period 25 Years</p> <p>(iii) Debt-Equity Ratio 70:30</p> <p>(iv) Capacity Utilisation Factor (CUF) and De-ration in CUF</p> <ul style="list-style-type: none"> • CUF of 20% with de-ration factor of 0.50% of CUF every Year after 2nd Year for Solar PV Power Plants. • CUF of 23% with de-ration factor of 0.25% of CUF every Year after 4th Year for Solar Thermal Plants <p>(v) O&M Expenses</p> <ul style="list-style-type: none"> • Rs. 12.76 lakh/MW for Solar PV Plants with escalation of 5.85% pa over the tariff. • Rs 17.24Lakh/MW with an escalation of 5.85% pa for the Solar Thermal Plants. <p>(vi) Interest on Long Term Loan 300 basis points higher than the average SBI base rate prevalent during 1st 6 months of the Year previous to relevant year.</p> <p>(vii) Interest on Working Capital 12.21%</p> <p>(viii) Return on Equity Return on Equity- RoE has been computed by grossing up the base rate of 16% with tax paid equivalent to MAT for first 10 years from COD and normal tax rate for remaining years of the project life</p>																								
13.	Guidelines for Metering, Billing and other requirements	The grid connectivity of rooftop PV Systems and small systems shall be governed by CEA (Technical Standards for connectivity to the Grid) Regulations 2007, CEA (Technical Standards for connectivity of the Distributed Generation Resources) Regulations 2013 and REGC as amended from time to time.																								
14.	Summary of Tariff	<p>The generic tariff levelled for 25 years for different technologies (Solar PV and Solar thermal) and for rooftop and solar plants is as under:</p> <p>Summary of tariff for Solar PV and Solar thermal plants</p> <table border="1" data-bbox="537 1192 1438 1682"> <thead> <tr> <th>Sl. No.</th> <th>Particulars</th> <th>Tariff (Rs./kWh) if AD benefit is not availed</th> <th>Tariff (Rs./kWh) if AD benefit is availed</th> </tr> <tr> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Solar Photo Voltaic (PV) Power Plants commissioned by 31.3.2016</td> <td>7.50</td> <td>6.63</td> </tr> <tr> <td>2.</td> <td>Solar Thermal Power Plants commissioned by 31.3.2017</td> <td>11.67</td> <td>10.27</td> </tr> <tr> <td>3.</td> <td>Roof Top Solar PV installations and other small solar PV power generation plants to be commissioned by 31.3.2016</td> <td>7.50</td> <td>6.63</td> </tr> <tr> <td>4.</td> <td>Small Solar Thermal Power generation plants to be commissioned by 31.03.2017</td> <td>11.67</td> <td>10.27</td> </tr> </tbody> </table> <p>Solar power plants claiming higher tariff worked out as above for projects not availing accelerated depreciation benefit, the generator shall give an undertaking that accelerated depreciation benefit shall not be availed.</p> <p>The above tariff is applicable for solar power plants where PPA is signed on or before 31-03-2015 and to be commissioned on or before 31-03-2016 in the case of Solar PV Plants and to be commissioned on or before 31-03-2017 in case of thermal plants.</p>	Sl. No.	Particulars	Tariff (Rs./kWh) if AD benefit is not availed	Tariff (Rs./kWh) if AD benefit is availed	1	2	3	4	1.	Solar Photo Voltaic (PV) Power Plants commissioned by 31.3.2016	7.50	6.63	2.	Solar Thermal Power Plants commissioned by 31.3.2017	11.67	10.27	3.	Roof Top Solar PV installations and other small solar PV power generation plants to be commissioned by 31.3.2016	7.50	6.63	4.	Small Solar Thermal Power generation plants to be commissioned by 31.03.2017	11.67	10.27
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