

COMBINED SUMMARY OF CERC & SERCs REGULATIONS/TARIFF ORDERS

Solar Power Projects

Sl. No.	Description	CERC	Assam	Chhatisgarh
	Title	Solar PV /Solar Thermal	Solar PV / Solar Thermal	Solar Roof Top PV
1.	Order Dated	Terms and Conditions for Tariff Determination for RE Sources Regulations 2012 dated 6 th Feb. 2012 with Amendments. Last Amendment Regulation, Dated 7.10.2015	Tariff Determination from RE Sources Regulations 2012 dated 10-9-2012, Co-gen & Generation from RES Regulations 2015 dated 2-5-2015	Determination of tariff for procurement of power from Solar Roof Top PV Project Regulation 2013 dated 7-10-2013 Applicable to Projects of Capacity 50 kW–1MW connected at 33 kV and below
2.	Tariff Period	25 Yrs	25 Yrs	25 Yrs
3.	Control Period	5 Yrs from FY 2012-13	5 Yrs from FY 2012-13	1.4.2013 to 31.3.2016
4.	Tariff			For New Projects 50% of tariff as per CSERC Regulations 2012; Tariff for existing Solar PV achieving COD in 2013-14 will be Rs.4.35/kWh
5.	Financial Parameters			
	(i) Capital Cost	Solar PV – Rs.1000 lakhs/MW Solar Thermal – Rs.1300 lakhs/MW (for FY 2012-13)	Solar PV – Rs.1000 lakhs/MW Solar Thermal – Rs.1300 lakhs/MW for 2012-13	
	(ii) Debt Equity Ratio	70:30	70:30	
	(iii) Loan Tenure	12 Yrs	12 Yrs	
	(iv) Interest on Loan (%) p.a.	SBI Base Rate + 300 basis points	SBI Base Rate+300 basis points	
	(v) Depreciation	5.83% - First 12 Yrs; Balance spread over remaining Useful Life	5.83% - First 12 Yrs; Balance spread over remaining Useful Life	
	(vi) Return on Equity	20% p.a. for 1 st 10 Yrs.; 24% p.a. 11 th Yr. Onwards	20% p.a. (Pre-Tax) for 1 st 10 Yrs. 24% p.a. (Pre-Tax) for 11 th Yr. Onwards	
	(vii) O&M Expenses	Solar PV – Rs.11 lakh/ MW; Solar Thermal – Rs.15 lakh/MW (During 1 st yr FY 2012-13)	For 1 st Yr of Operation Solar PV – Rs.11 lakh/ MW; Solar Thermal – Rs. 15 lakh/MW	
	Escalation (%) p.a.	5.72%	5.72%	

	(viii) Interest on Working Capital (%)	SBI Base Rate +350 basis points	SBI Base Rate +350 Basis Points	
6.	Discount factor for levelised Tariff			
7.	Normative Parameters			
	(i) PLF/Capacity Utilization Factor	Solar PV - 19% Solar Thermal – 23%	Solar PV – 19% Solar Thermal – 23%	
	(ii) Auxiliary Consumption	Solar Thermal – 10%	Solar Thermal – 10%	
	(iii) Useful life (Yrs)	25 yrs	25 Yrs	
8.	(i) Rebate	2% Through LC; 1% within 1 Month Other than LC	2% - Payment Through LC; 1% Payment within 15 days Other Than LC	
	(ii) Late Payment Surcharge	1.25% p.m. beyond 60-days	1.25% p.m. beyond 30-days	1.25% p.m. beyond 30 days
9.	Sharing of CDM Benefits	100% to developer in 1 st Yr after COD; 10% to Beneficiary in 2 nd Yr; 10% Increase Progressively upto 50% then equal sharing	100% to developer in 1 st Yr after COD; 10% to Beneficiary in 2 nd Yr; 10% Increase Progressively upto 50% then equal sharing	
10	Subsidy/Incentive by State/Central Govt. including Income Tax benefit on advance depreciation (AD)	To be Considered for Tariff Determination	To be Considered for Tariff Determination	
11	Taxes & Duties	Tariff Exclusive of Taxes and Duties. Allowed as Pass Through	Tariff Exclusive of Taxes and Duties. Allowed same Pass Through	

Sl. No.	Description	CERC	Assam	Chhatisgarh
12.	Evacuation Facilities		DISCOM / TRANSCO to Construct Interface Line Upto 5 km; beyond 5 km 50:50 sharing between Discom/Transco and Generator. Interconnecting facility/ equipment to be installed by generator at their own cost	
13.	Transmission and Wheeling charges		Transmission charges payable for Open Access @ 2/3 rd of charges applicable for Open Access Customer. No wheeling or banking charges if sold to state DISCOM / TRANSCO	
14.	Cross Subsidy charge			
15.	Dispatch Principles	Must Run	5 MW & above and connected at 33 kV and above – Scheduling Otherwise – Must Run	
16.	Banking		100% banking during peak; Banking charges @ 2% of energy banks	
17.	(i) Date of order (ii) RPO		RPO and its compliance Regulations 2010 Dated 2.11.2010 and Amendment 2015 Dated 21.2.2015 Solar RPO varies from 0.5% to 1.5% for the yrs 2015-16 to 2019-20	

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Solar Power Projects

Sl. No.	Description	Delhi	Gujarat	Jharkhand
	Title	Solar PV	Solar PV	Solar PV/ Solar Thermal
1.	Order Dated	Terms and conditions for Determination of Tariff for Grid Connected Solar PV Projects Regulation 2013 Notification dated 8 January 2013	Determination of Tariff for Procurement of power by the Distribution Licensees and others from Solar Energy Projects for the State of Gujarat. - Order No. 3 of 2015	Determination of tariff for procurement of power from Solar PV and Solar Thermal Power Project - Draft, Regulations, 2015
2.	Tariff Period	25 Yrs		25 yrs having COD up to 31st March, 2020
3.	Control Period	3 Yrs Commencing from 2012-13	1.7.2015 to 31.3.2018	Up to 31 st March, 2020
4.	Tariff		Levelised Tariff for Projects commissioned (without AD) MW scale: 1.7.2015 to 31.3.2018 - Rs. 6.77/ kWh to Rs. 5.87/kWh kW scale Rs. 8.42/kWh to Rs. 7.28/kWh	
5.	Financial Parameters			
	(i) Capital Cost	Rs.1000 lakhs/MW for 2012-13	MW scale – Rs.615 lakhs/MW kW scale – Rs. 0.80 lakhs/kW	Solar PV - Rs.605.85 lakhs /MW/ Solar Thermal - Rs. 1200 lakhs/MW
	(ii) Debt Equity Ratio	70:30	70:30	70:30
	(iii) Loan Tenure	12 Yrs	10 yrs	12
	(iv) Interest on Loan (%) p.a.	SBI Base Rate + 300 Basis Points	12.70% p.a.	Average SBI Rate during first 6 months of previous yrs +3%
	(v) Depreciation	5.83% First 12 Yrs; Balance Spread Over Useful Life	6% for first 10 yrs 2% next 15 yrs	1 to 12 yrs – 5.83% Balance spread over useful life
	(vi) Return on Equity	20% (Pre-Tax) for first 10 Yrs 24% (Pre-Tax) 11 th Yr Onward	14% p.a.	20% - for first 10 yrs, 24% - from 11 th yr to 25 yr
	(vii) O&M Expenses	Rs.11 lakh / MW for 1 st Yr of Operation	Rs.10.90 lakh / MW Rs.0.01 lakh / kW	Solar PV - Rs.11.88 Lakhs/ MW / Solar Thermal - Rs.17.16 Lakhs/MW
	Escalation (%) p.a.	5.72%	5.72%	5.72%
	(viii) Interest on Working Capital (%)	SBI Base Rate +350 Basis Points	11.85% p.a	Average SBI Rate during first 6 months of previous yrs +3.5%
6.	Discount factor for levelised Tariff		10.647% Annually	

Sl. No.	Description	Delhi	Gujarat	Jharkhand
7.	Normative Parameters			
	(i) PLF/Capacity Utilization Factor	19%	19% (Performance degradation) 1% annually	Solar PV -19% Solar Thermal - 23%
	(ii) Auxiliary Consumption		0.25%for MW scale, NIL for kW scale	Solar PV -NIL Solar-Thermal-10%
	(iii) Useful life (Yrs)	25 yrs	25 yrs	25 Yrs
8.	(i) Rebate	2% through LC or Inter Bank E Transfer; 1% payment other than LC		
	(ii) Late Payment Surcharge	1.25% pm beyond 60-days		
9.	Sharing of CDM Benefits	100% to developer 1 st Yr; 10% to Beneficiary in 2 nd Yr; 10% Progressive Increase Every Yr Till 50%; then 50:50 Sharing	100% to developer in 1 st Yr after COD; 10% to Beneficiary in 2 nd Yr; 10% Increase Progressively upto 50% then equal sharing	100% to developer 1 st Yr; 10% to Beneficiary in 2 nd Yr; 10% Progressive Increase Every Yr Till 50%; then 50:50 Sharing
10	Subsidy/Incentive by State/ Central Govt. including Income Tax benefit on advance depreciation (AD)	To be Considered for Tariff Determination including AD benefit and GBI Incentive		
11	Taxes & Duties	Tariff Exclusive of Taxes & Duties but Allowed as Pass Through	MAT – 20.008% p.a. first 10 yrs Corporate Tax rate 32.445% p.a. - 11 th to 25 th yr	
12.	Evacuation Facilities		Construction of transmission line by the developer	STU to bear 100% cost of evacuation infrastructure
13.	Transmission and Wheeling charges		To be borne by the Distribution Licensee	50% discount on wheeling charges and other surcharge on wheeling charges
14.	Cross Subsidy charge		No cross-subsidy surcharge in case of third-party sale or captive use	
15.	Dispatch Principles	Must Run	Must Run	
16.	Banking		Projects commissioned under captive mode and without REC/third party sale allowed for banking for one month	100% Banking Allowed
17.	(i) Date of order (ii) RPO	RPO and REC Implementation Regulations dt. 1 st October 2012 Varies 2012-13 to 2016-17 Solar 0.15% to 0.35% out of Total RPO 3.40% to 9%	RPO and REC Implementation Regulations 2010 dated 17.4.2010 and 1 st Amendment Regulations 2014 and 2 of 2015. RPO varies from 2010-11 to 2016-17 Solar—from 0.25% to 1.75% Non-solar from 4.75% to 8.25%	RPO and its compliance Regulations 2010 Order dated 21/7/2010; Amendment dated 29/11/2012: 2013-14 to 2015-16 RPO - 1% Solar and 3% Non-Solar

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Solar Power Projects

Sl. No.	Description	Karnataka	Madhya Pradesh	Maharashtra
	Title	Solar Roof Top / Small Solar Photovoltaic Power Plants	Solar Rooftop/Small Solar	Solar PV/ Solar Thermal
1.	Order Dated	Determination of tariff and other norms for Solar Rooftop and Small Photovoltaic Power Plants. Dated 2nd May, 2016	Tariff order for Solar Energy based generation, order reference SMP-25/2012, August 2012 with Amendment in extension in the Control period Dated 25.3.2014	Terms and Conditions for determination of RE tariff - Regulations 2015 Draft
2.	Tariff Period	25 years	25 yrs	25 Yrs
3.	Control Period		From the date of issue and continue till further orders	Review period: 5 yrs ending 2019-20 with first yr being date of notification
4.	Tariff	Rs/Unit (Without Capital Subsidy) for capacity 1 to 10 kW - 7.08 Above 10 and up to 50kW - 6.61 Above 50 and up to 100 kW 6.14 Above 100 and up to 500 kW - 5.67 Above 500 and up to 1000 kW - 5.20 Rs/Unit (With Capital Subsidy of 15%) for capacity 1 to 10 kW - 6.03 Above 10 and up to 50kW - 5.64 Above 50 and up to 100 kW - 5.23 Above 100 and up to 500 kW - 4.83 Above 500 and up to 1000 kW - 4.43	Rs. 10.70/kWh 27 paise kVARh of consumption	Tariff for Solar Roof Top PV & Other Small Solar Power to be Rs.0.50 / kWh higher than Solar PV
5.	Financial Parameters			
	(i) Capital Cost	Rs. Lakh / kW for capacity 1 to 10 kW - 0.75 Above 10 and up to 50kW - 0.70 Above 50 and up to 100 kW 0.65 Above 100 and up to 500 kW - 0.60 Above 500 and up to 1000 kW - 0.55	Rs. 1050 lakhs / MW	Solar PV - Rs. 605.85 lakhs/MW, SolarThermal - Rs.1200 lakh/MW (for 2015-16)
	(ii) Debt Equity Ratio	70:30	70:30	70:30

Sl. No.	Description	Karnataka	Madhya Pradesh	Maharashtra
	(iii) Loan Tenure	12 yrs		12 yrs
	(iv) Interest on Loan (%) p.a.	12.0%	12.75%	SBI Base Rate +300 basis points
	(v) Depreciation	First 12-Yrs – 5.83% Next 13-Yrs – 1.54%	7% for first 10 yrs; 1.333% for 11 to 25 yrs	5.83% - First 12 Yrs; Balance Spread Over remaining Useful Life
	(vi) Return on Equity	16% p.a.	20% p.a. Pre-Tax	16% p.a.
	(vii) O&M Expenses	1% of Capital Cost for FY 2016-17		Solar PV Rs. 13 / Solar Thermal 15 lakh/MW for 1 st Yr of Review period
	Escalation (%) p.a.	5.72%		5.72%
	(viii) Interest on Working Capital (%)	12.5%	13.25%	SBI Base Rate +350 basis points
6.	Discount factor for levelised Tariff	13.20%	10.20%	
7.	Normative Parameters			
	(i) PLF/Capacity Utilization Factor	19%		Solar PV 19% / Solar Thermal 23%
	(ii) Auxiliary Consumption			Solar Thermal-10%
	(iii) Useful life (Yrs)	25 Yrs	25 yrs	25 Yrs
8.	(i) Rebate		2% for payment through LC; 1% for payment within 15 days	2% - Payment through LC 1% within 1 month other than LC
	(ii) Late Payment Surcharge		Beyond 30 days surcharge @ 2% over STPLR of SBI	1.25% p.m. beyond 60-days
9.	Sharing of CDM Benefits	100% to developer in 1 st yr after COD 10% to beneficiary in 2 nd yr; 10% progressive increase/yr upto 50%, thereafter 50:50 sharing	100% to developer during first yr of COD thereafter reducing by 10% every yr till (50:50) then equal sharing	All benefits to be retained by Generating Company
10	Subsidy/Incentive by State/Central Govt. including Income Tax benefit on advance depreciation (AD)			Shall be considered while determining tariff, GBI shall not be considered.

11	Taxes & Duties			Shall not be considered for Tariff determination but pass through
12.	Evacuation Facilities	Developer upto interconnection point and STU/Distribution Licence beyond that		
13.	Transmission and Wheeling charges	The Wheeling and Cross Subsidy surcharge shall be applicable as per Commission's Order dated 18th August, 2014.	<ul style="list-style-type: none"> - No transmission and wheeling charges for licensee - For use/sale to third party as per decision of Commission - Wheeling charges @ 2% of energy injected to be deducted by licensee. - 4% subsidy on wheeling charges payable by state government to licensee. 	
14.	Cross Subsidy charge			
15.	Dispatch Principles		Out of purview of scheduling and merit order despatch	Must Run
16.	Banking	The Banking shall be applicable as per Commission's Order dated 18th August, 2014.		
17.	(i) Date of order (ii) RPO		<p>Cogeneration and Generation of Electricity from Renewable Sources of Energy - Regulations, 2010 (Revision-I) Notification Dated 19th November 2010 with Amendments Dated 30-6.2011, 9.4.2012, 25.11.2014, 30.1.2015 and 28-9-2015</p> <p>RPO Varies from 2010-11 to 2018-19 from 0 to 1.75% for Solar and 0.80 to 7.5% for Non- Solar power</p>	<p>RPO, its compliance and REC Regulation 2010</p> <p>RPO varies for Solar from 0.25% to 0.50% & Non-Solar – 5.75% to 8.50% from 2010-11 to 2015-16</p>