

GUJARAT ELECTRICITY REGULATORY COMMISSION

Determination of Tariff for Procurement by the Distribution Licensees and others from Solar Energy Projects

Order No. 1 of 2012 dated 27.1.2012

Sl. No.	Description	Summary of Regulations
1.	Title	Determination of Tariff for Procurement by the Distribution Licensees and others in Gujarat from Solar Energy. Order No. 1 of 2012 dated 27.1.2012
2.	Applicability	Thought out the state of Gujrat for solar photovoltaic Power Projects
3.	Capital Cost(Solar PV) For Megawatt-scale System(>1 MW) For Kilowatt-scale System(Upto to 1MW)	Rs. 1000 Lacs per MW Rs 1.2 Lacs per KW <ul style="list-style-type: none"> • Capital Cost to include cost of land • Power evacuation line infrastructure to be developed /upgraded by the Distribution company / STU
4.	O&M (Solar PV)	0.75% of Capital Cost.
5.	Escalation in O&M Cost	5.72% Annually
6.	Inverter Replacement Cost	3.81% of Capital Cost in 13 th Year
7.	Capacity Utilization Factor(Solar PV)	18%
8.	Performance Degradation	1% Annually
9.	Auxiliary Consumption (Solar PV)	0.25% of Energy Generated
10.	Useful Life(Solar PV)	25 years
Financial Parameters for Photovoltaic Power Plants		
11.	Debt: Equity Ratio	70:30
12.	Loan Tenure	10 years
13.	Interest Rate on loan	13%
14.	Insurance cost	0.35% of the net assets considered Annually over & above O&M cost
15.	Working Capital	Sum of (i) one month's O&M expenses (ii) Receivables equivalent to one month's energy charges for sale of electricity calculated on a normative CUF.
16.	Interest on working Capital	12%
17.	Rate of Depreciation	(i) 6% Annually for the first 10 years (ii) 2% Annually for the next 15 years
18.	Minimum Alternate Tax Rate	20.008% Annually for the first 10 years
19.	Corporate Tax Rate	32.445% Annually
20.	Return on Equity	14% Annually
21.	Discount Factor for levelised Tariff	10.74% Annually

Summary of Tariff for Photo voltaic Power Plants

Period	29 th Jan.'12 to 31 st March'13	1 st April 2013 to 31 st March'2014	1 st April'2014 to 31 st March '2015
For MW–scale photovoltaic projects availing accelerated depreciation			
Levelized Tariff for 25 years	Rs 9.28 per kwh	Rs 8.63 per kwh	Rs 8.03 per kwh
For first 12 years	Rs 9.98 per kwh	Rs 9.13 per kwh	Rs 8.35 per kwh
For subsequent 13 years	Rs 7.00 per kwh	Rs 7.00 per kwh	Rs 7.00 per kwh
For MW–scale photovoltaic projects not availing accelerated depreciation			
Levelized Tariff for 25years	Rs 10.37 per kwh	Rs 9.64 per kwh	Rs 8.97 per kwh
For first 12 years	Rs 11.25 per kwh	Rs 10.30 per kwh	Rs 9.42 per kwh
For subsequent 13 years	Rs 7.50 per kwh	Rs 7.50 per kwh	Rs 7.50 per kwh
For kilowatt- scale photovoltaic projects availing accelerated depreciation			
Levelized Tariff for 25 years	Rs 11.14 per kwh	Rs 10.36 per kwh	Rs 9.63 per kwh
For kilowatt- scale photovoltaic projects not availing accelerated depreciation			
Levelized Tariff for 25 years	Rs 12.14 per kwh	Rs 11.57 per kwh	Rs 10.76 per kwh

Determination of Tariff for Solar Thermal Technology		
22	Capital Cost	Rs 1400 Lacs per MW
23	O&M cost	1.5% of Capital cost
24	Escalation in O&M cost	5.72% Annually
25	Capacity utilization factor	23%
26	Performance Degradation	0.25% Annually
27	Auxiliary Consumption	10% of Energy Generation
28	Useful Life	25 years
Financial Parameters		
29	Debt: Equity Ratio	70:30
30	Loan Tenure	10 years
31	Interest rate of Loan	13.00%
32	Insurance cost	0.35% Annually
33	Interest on working capital	12.00% Annually
34	Working Capital	Sum of (i) one month O&M expenses (ii) Receivables equivalent to one month's energy charges for sale of electricity calculated on a normative CUF.
35	Rate of Depreciation	6% annually for the first 10 years 2% annually for the next 15 years
36	Minimum Alternate Tax rate	20.008% Annually for first 10 years
37	Corporate Tax Rate	32.445% Annually
38	Return on Equity	14% Annually
39	Discount factor	10.74% Annually

Summary of Tariff for Solar Thermal Power Plants without storage

Levelized Tariff for Solar Thermal Projects	
With accelerated depreciation benefit : Rs 11.55 per kWh for 25 years	
Without accelerated depreciation benefit : Rs 12.91 per kWh for 25 years	

Tariff for variants of solar Thermal Plant (Variants including storage and Hybrid)		
The Tariff determination for such system shall be taken up on case-to-case basis by the GERC under 'Project Specific' tariff determination route.		
Other Considerations		
41	Plant & Machinery	Only new plants and machinery eligible
42	Auxiliary Power Supply	STU/ Distribution licensee to provide auxiliary power from same point of connectivity.
43	Reactive Energy Charges	As approved by the commission in tariff orders for GETCO from time to time.
44	Evacuation Facilities	Transmission lines from the switchyard to the GETCO substation to be laid by GETCO and cost shall be borne by GETCO.
45	Transmission and wheeling charges for captive use/third party sale	<p>(i) Wheeling at 66 kV and above applicable to plants of capacity greater than 4 MW: Electricity wheeled within the state allowed on payment of transmission charges and transmission losses applicable to normal open access consumer.</p> <p>(ii) Voltage below 66 kV: wheeling allowed on the payment of transmission charges as applicable to normal open access customers and transmission and wheeling loss @ 7% of the energy fed into the grid. Loss shall be shared between transmission and distribution licensees in the ratio of 4:3.</p> <p>(iii) Wheeling at 11 kV - 66 kV Applicable to ground-mounted or roof top solar plant of capacity between 100 KW and 1 MW and ground –mounted solar plants of capacity between 1 MW and 4 MW. Wheeling within the same distribution licensee allowed on payment (in kind) of distribution loss @ 3% of the energy fed into the grid. Wheeling to the desired location(s) within the state but in the area of a different distribution licensee allowed on payment of transmission charges as applicable to normal open-access customers and T&D loss @ 10% of the energy fed into the grid. Losses shall be shared among the transmission licensee and two distribution licensees involved in the ratio of 4:3:3.</p> <p>(iv) No Wheeling charges applicable for wheeling at 415 volt or below</p> <p>(v) Wheeling at two or more locations To pay-Rs 0.05 per unit on energy fed in the grid to distribution company in whose area power is consumed in addition to the transmission charges and losses.</p>
46	Cross- Subsidy Surcharge	No cross-subsidy surcharges shall be levied in case of third-party sale
47	Applicability of Intra-state ABT	Not applicable
48	Energy Accounting	Electricity generated to be metered and readings taken jointly by the developer with Gujarat Energy Development Agency. Gujarat Energy Transmission Company Ltd. or Distribution company
49	Non-Applicability of Merit order	Solar Energy kept out from the merit order dispatch principles
50	Power Purchase Agreement (PPA)	25 years Developer to submit a Bank guarantee/ security deposit of Rs 50 lack/MW to distribution licensee on signing of PPA
51	Sharing of clean Development Mechanism(CDM) Benefit	Proceeds of carbon credit from approved CDM project to be shared between generating company and concerned beneficiaries as follows: <ul style="list-style-type: none"> • 100% by project developer in the first year after the date of commercial operation of the generating station. • 2nd year – share of beneficiaries @ 10% to progressively increase by 10% every year up to 50% where after to be shared in equal proportion, by the generating company and the beneficiaries
52	Control Period	29.1.2012 to 31.3.2015