

Assumption Parameters for Solar PV Power Projects above 1 MW upto 5 MW

Sr. No	Assumption Head	Sub Head	Sub Head(2)	Unit	Value	
1	Power Generation	Capacity	Installed Generation Capacity	KW	1000	
			Capacity Utilisation Factor	%	0.19	
			Auxiliary Consumption	%	0	
			Transmission losses	%	0.7	
			Useful Life	%	25	
2	Project Cost	Capital Cost /MW	Project Cost	Rs. Lacs/MW	543.27	
3	Project Financing	Debt Equity	Tariff Period	Year	25	
			Debt Component	Debt	%	70
				Equity	%	30
		Loan Amount		Rs. Lacs/MW	380.289	
		Equity Component	Moratorium Period	Year	0	
			Repayment Period	Year	12	
			Interst Rate	%	12.76	
			Equity Amount	Rs. Lacs/MW	162.981	
			Return of equity for first 10 Years	%	19	
Return of equity from 11th Years onwards	%		22			
4	Subsidy	Subsidy			0	
5	Depreciation	Depreciation	Recovery of Depreciation	%	90	
			Annual Rate of Depreciation till completion of Loan Repayment (balance spread in remaining years)	%	5.83	
			13th year Onward	%	1.54	
6	Operation & Maintenance		Total O&M Expenses	Rs. Lacs/MW	7	
			Annual Escalation	%	5.72	
7	Working Capital		O&M Charges	Months	1	
			Maintenance Spares	% of O&M expenses of a Year	15	
			Recievables	Months	2	
			Interest on Working capital	%	13.26	
8	Accelerated Depreciation	Accelerated Depreciation	Book Depreciation	%	5.28	
			Tax Depreciation	%	80	
			Additional Depreciation	%	20	
			Corporate Tax including Surcharge & Cess	%	33.99	
9	Discount Factor		Discount Rate	%	10.32	

		Determination of Tariff for Solar PV Power Projects above 1 MW upto 5 MW																										
Unit Generation	unit	year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
Installed Capacity	KW		1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
Gross generation	MU		1.664	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	1.66	
Losses	MU		0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	
Net Generation	MU		1.653	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	1.65	
Fixed Cost		year																										
O&M Expences	₹lacs		7.00	7.400	7.82	8.27	8.74	9.24	9.77	10.33	10.92	11.55	12.21	12.91	13.65	14.43	15.25	16.12	17.05	18.02	19.05	20.14	21.29	22.51	23.80	25.16	26.60	
Depriciation	₹lacs		31.67	31.67	31.67	31.67	31.67	31.67	31.67	31.67	31.67	31.67	31.67	31.67	8.37	8.37	8.37	8.37	8.37	8.37	8.37	8.37	8.37	8.37	8.37	8.37	8.37	8.37
Interest on Term Loan	₹lacs		46.50	42.46	38.42	34.37	30.33	26.28	22.24	18.20	14.15	10.11	6.07	2.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capi	₹lacs		2.85	2.78	2.71	2.64	2.58	2.51	2.45	2.39	2.33	2.27	2.33	2.27	1.74	1.78	1.83	1.87	1.92	1.98	2.03	2.09	2.15	2.22	2.29	2.36	2.44	
Return on Equity	₹lacs		30.97	30.97	30.97	30.97	30.97	30.97	30.97	30.97	30.97	30.97	35.86	35.86	35.86	35.86	35.86	35.86	35.86	35.86	35.86	35.86	35.86	35.86	35.86	35.86	35.86	35.86
Total fixed Cost	₹lacs		118.99	115.28	111.59	107.92	104.29	100.68	97.10	93.56	90.04	86.57	88.13	84.73	59.61	60.43	61.30	62.22	63.19	64.22	65.31	66.46	67.67	68.95	70.31	71.75	73.26	
Levellised CoG																												
Per unit CoG	Unit	levellised																										
O&M Expences	₹/kWh		0.68	0.42	0.45	0.47	0.50	0.53	0.56	0.59	0.63	0.66	0.70	0.74	0.78	0.83	0.87	0.92	0.98	1.03	1.09	1.15	1.22	1.29	1.36	1.44	1.52	1.61
Depriciation	₹/kWh		1.57	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	1.92	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
Interest on Term Loan	₹/kWh		1.32	2.81	2.57	2.32	2.08	1.84	1.59	1.35	1.10	0.86	0.61	0.37	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Interest on Working Capi	₹/kWh		0.15	0.17	0.17	0.16	0.16	0.16	0.15	0.15	0.14	0.14	0.14	0.14	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.13	0.13	0.13	0.14	0.14	0.15	
Return on Equity	₹/kWh		1.97	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	1.87	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17	2.17
Total CoG	₹/kWh		5.69	7.20	6.9748	6.75	6.53	6.31	6.09	5.88	5.66	5.45	5.24	5.33	5.13	3.61	3.66	3.71	3.76	3.82	3.89	3.95	4.02	4.09	4.17	4.25	4.34	4.43
Discounted factor	%		1	0.91	0.82	0.74	0.68	0.61	0.55	0.50	0.46	0.41	0.37	0.34	0.31	0.28	0.25	0.23	0.21	0.19	0.17	0.15	0.14	0.13	0.12	0.10	0.09	
levellised Tariff	₹/kWh	5.69	7.20	6.3223	5.55	4.86	4.26	3.73	3.26	2.85	2.48	2.16	2.00	1.74	1.11	1.02	0.94	0.86	0.79	0.73	0.67	0.62	0.57	0.53	0.49	0.45	0.42	

Determination of Accelerated Depreciation Benefit for Solar PV Power Projects above 1 MW upto 5 MW																										
Depreciation Amount	90%																									
Book Depreciation Rate	5.28%																									
Tax Depreciation Rate	80%																									
Additional Depreciation	20%																									
Income Tax (Normal rate)	33.99%																									
Capital cost (In Lacs)	543.27																									
Years	Units	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Book Depreciation	%	2.64	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	5.28	2.88	0.00	0.00	0.00	0.00	0.00	0.00	
Book Depreciation	₹ Lacs	14.34	28.68	28.68	28.68	28.68	28.68	28.68	28.68	28.68	28.68	28.68	28.68	28.68	28.68	28.68	28.68	28.68	15.65	0.00	0.00	0.00	0.00	0.00	0.00	
Accelerated Depreciaton opening	%	100	50	5.00	1.00	0.20	0.04	0.01	0.00																	
Allowed during the Year	%	50	45	4	0.8	0.16	0.03	0.01																		
Closing	%	50	5	1	0.2	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Accelerated Depreciaton	₹ Lacs	271.64	244.47	21.73	4.35	0.87	0.16	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Net Depreciaton Benefit	₹ Lacs	257.29	215.79	-6.95	-24.34	-27.82	-28.52	-28.63	-28.68	-28.68	-28.68	-28.68	-28.68	-28.68	-28.68	-28.68	-28.68	-28.68	-15.65	0.00	0.00	0.00	0.00	0.00	0.00	
Tax Benefit	₹ Lacs	87.45	73.35	-2.36	-8.27	-9.45	-9.69	-9.73	-9.75	-9.75	-9.75	-9.75	-9.75	-9.75	-9.75	-9.75	-9.75	-9.75	-5.32	0.00	0.00	0.00	0.00	0.00	0.00	
Energy Generation	MU	0.826	1.653	1.653	1.653	1.653	1.653	1.653	1.653	1.653	1.653	1.653	1.653	1.653	1.653	1.653	1.653	1.653	1.653	1.653	1.653	1.653	1.653	1.653	1.653	
Discounting factor from assumption		1	0.91	0.82	0.74	0.68	0.61	0.55	0.50	0.46	0.41	0.37	0.34	0.31	0.28	0.25	0.23	0.21	0.19	0.17	0.15	0.14	0.13	0.12	0.10	
Discounting factor		1	0.95	0.86	0.78	0.71	0.64	0.58	0.53	0.48	0.43	0.39	0.36	0.32	0.29	0.27	0.24	0.22	0.20	0.18	0.16	0.15	0.13	0.12	0.11	
Per Unit Energy Generation Benefit		10.58	4.44	-0.14	-0.50	-0.57	-0.59	-0.59	-0.59	-0.59	-0.59	-0.59	-0.59	-0.59	-0.59	-0.59	-0.59	-0.59	-0.32	0.00	0.00	0.00	0.00	0.00	0.00	
Discounted Net Depreciaton Benefit	₹ Lacs	257.29	205.69	-6.01	-19.06	-19.75	-18.35	-16.70	-15.17	-13.75	-12.46	-11.30	-10.24	-9.28	-8.41	-7.63	-6.91	-6.27	-3.10	0.00	0.00	0.00	0.00	0.00	0.00	
Discounted Tax Benefit	₹ Lacs	87.45	69.92	-2.04	-6.48	-6.71	-6.24	-5.68	-5.16	-4.67	-4.24	-3.84	-3.48	-3.16	-2.86	-2.59	-2.35	-2.13	-1.05	0.00	0.00	0.00	0.00	0.00	0.00	
Discounted Energy Generation	MU	0.826	1.575	1.428	1.294	1.173	1.064	0.964	0.874	0.792	0.718	0.651	0.590	0.535	0.485	0.439	0.398	0.361	0.327	0.297	0.269	0.244	0.221	0.200		
Discounted Per Unit Energy Generation		10.58	4.23	-0.12	-0.39	-0.41	-0.38	-0.34	-0.31	-0.28	-0.26	-0.23	-0.21	-0.19	-0.17	-0.16	-0.14	-0.13	-0.06	0.00	0.00	0.00	0.00	0.00	0.00	

Levellised Benefit

Levellised Tax benefit 9.261

Levellised Energy Generation i 1.5719

Levellised Benefit Rs/kWh 0.59