

Annexure -A

Assumptions Parameters for Solar PV Project up to 1 MW		
Generating Capacity (MW)	MW	1
Project Cost		
Cost/kW	Rs Cr/MW	6.3008
Project Cost	Rs Crores	6.3008
Term	Years	25
Project Financing		
Project Debt	% of project cost	70%
Project Debt	Rs Crores	4.41056
Equity	Rs Crores	1.89024
Term of Debt	Years	12
Moratorium	Years	0
Interest Rate	%	13.00%
Depreciation		
Recovery of Depreciation	%	90%
Rate of Depreciation (First 12 Years)	%	5.83%
Rate of Depreciation (Latter 13 years)	%	1.54%
Operating Norms		
CUF	%	19%
Availability	%	100%
Auxiliary Consumption	%	0.00%
Transformation Losses	%	0.00%
Transmission losses		0.70%
O&M Expenses	Rs. In Cr./MW	0.13
O&M Expenses w.r.t Capital Cost	%	
Annual Escalation Factor	%	5.72%
Tax		
Tax Rate	%	30.00%
MAT Rate	%	18.50%
Surcharge		10.00%
Cess Rate		3.00%
Effective ROE after 10 Years		22.00%
Effective ROE for Initial 10 Years		19.00%
Working Capital Norms		
Receivables	Months	2
Spares	% of O&M Cost	15%
O&M Expenses	Months	1
Interest on Working Capital	%	13.50%
Discount Factor	%	10.42%
Depreciation amount		90.00%
Book Depreciation rate		5.28%
Tax Depreciation rate		80.00%
Income Tax (MAT)		20.00%
Income Tax (Normal Rates)		33.99%

Detetermination of Tariff for Solar PV Power Project up to 1 MW																									
Years	Y 01	Y 02	Y 03	Y 04	Y 05	Y 06	Y 07	Y 08	Y 09	Y 10	Y 11	Y 12	Y 13	Y 14	Y 15	Y 16	Y 17	Y 18	Y 19	Y 20	Y 21	Y 22	Y 23	Y 24	Y 25
Gross Generation (MU)	1.664	1.664	1.664	1.669	1.664	1.664	1.664	1.669	1.664	1.664	1.664	1.669	1.664	1.664	1.664	1.669	1.664	1.664	1.664	1.669	1.664	1.664	1.664	1.669	1.664
Net Generation (MU)	1.664	1.664	1.664	1.669	1.664	1.664	1.664	1.669	1.664	1.664	1.664	1.669	1.664	1.664	1.664	1.669	1.664	1.664	1.664	1.669	1.664	1.664	1.664	1.669	1.664
Transmission Losses @ 0.7% (MU)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Saleable Energy (MU)	1.653	1.653	1.653	1.657	1.653	1.653	1.653	1.657	1.653	1.653	1.653	1.657	1.653	1.653	1.653	1.657	1.653	1.653	1.653	1.657	1.653	1.653	1.653	1.657	1.653
Power Available for sale	1.653	1.653	1.653	1.657	1.653	1.653	1.653	1.657	1.653	1.653	1.653	1.657	1.653	1.653	1.653	1.657	1.653	1.653	1.653	1.657	1.653	1.653	1.653	1.657	1.653
Fixed Cost (Rs. Crores)																									
RoE	0.359	0.359	0.359	0.359	0.359	0.359	0.359	0.359	0.359	0.359	0.416	0.416	0.416	0.416	0.416	0.416	0.416	0.416	0.416	0.416	0.416	0.416	0.416	0.416	0.416
Depreciation	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.097	0.097	0.097	0.097	0.097	0.097	0.097	0.097	0.097	0.097	0.097	0.097	0.097
O&M	0.130	0.137	0.145	0.154	0.162	0.172	0.182	0.192	0.203	0.214	0.227	0.240	0.253	0.268	0.283	0.299	0.317	0.335	0.354	0.374	0.395	0.418	0.442	0.467	0.494
WC Interest	0.036	0.035	0.035	0.034	0.033	0.033	0.032	0.032	0.031	0.031	0.032	0.031	0.025	0.026	0.027	0.028	0.029	0.030	0.031	0.032	0.033	0.034	0.036	0.037	0.039
Interest on long Term loans	0.549	0.502	0.454	0.406	0.358	0.311	0.263	0.215	0.167	0.119	0.072	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total Fixed Cost (incl tax)	1.442	1.401	1.360	1.320	1.281	1.241	1.203	1.165	1.128	1.091	1.113	1.078	0.792	0.807	0.823	0.840	0.858	0.878	0.898	0.919	0.942	0.965	0.991	1.017	1.046
Total Cost of Generation	1.442	1.401	1.360	1.320	1.281	1.241	1.203	1.165	1.128	1.091	1.113	1.078	0.792	0.807	0.823	0.840	0.858	0.878	0.898	0.919	0.942	0.965	0.991	1.017	1.046
Levelized Tariff (CoG)																									
Discount Rate																									
Discounting Factor	1.000	0.906	0.820	0.743	0.673	0.609	0.552	0.500	0.452	0.410	0.371	0.336	0.304	0.276	0.250	0.226	0.205	0.185	0.168	0.152	0.138	0.125	0.113	0.102	0.093
RoE	2.28	2.173	1.968	1.782	1.610	1.462	1.324	1.199	1.083	0.983	0.890	0.934	0.843	0.766	0.693	0.628	0.567	0.515	0.466	0.422	0.381	0.346	0.314	0.284	0.257
Depreciation	1.83	2.223	2.013	1.823	1.646	1.495	1.354	1.226	1.107	1.005	0.911	0.825	0.745	0.679	0.622	0.572	0.527	0.486	0.448	0.414	0.383	0.354	0.327	0.302	0.278
O&M	1.26	0.787	0.753	0.721	0.688	0.661	0.633	0.606	0.578	0.555	0.532	0.509	0.486	0.467	0.447	0.428	0.408	0.392	0.375	0.359	0.343	0.329	0.315	0.302	0.288
WC Interest	0.20	0.217	0.193	0.171	0.152	0.135	0.121	0.107	0.095	0.085	0.076	0.071	0.063	0.047	0.044	0.041	0.038	0.036	0.033	0.031	0.029	0.028	0.026	0.024	0.023
Interest on long Term loans	1.57	3.325	2.749	2.252	1.820	1.458	1.145	0.877	0.648	0.458	0.296	0.161	0.048	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total Cost	7.14	8.724	7.675	6.750	5.916	5.211	4.575	4.015	3.512	3.087	2.705	2.499	2.186	1.458	1.346	1.243	1.146	1.063	0.984	0.912	0.843	0.784	0.728	0.677	0.628

Annexure-B

Assumptions Parameters for Solar PV Project above 1 MW to 5 MW		
Generating Capacity (MW)	MW	1
Project Cost		
Cost/kW	Rs Cr/MW	6.2099
Project Cost	Rs Crores	6.2099
Term	Years	25
Project Financing		
Project Debt	% of project cost	70%
Project Debt	Rs Crores	4.34693
Equity	Rs Crores	1.86297
Term of Debt	Years	12
Moratorium	Years	0
Interest Rate	%	13.00%
Depreciation		
Recovery of Depreciation	%	90%
Rate of Depreciation (First 12 Years)	%	5.83%
Rate of Depreciation (Latter 13 years)	%	1.54%
Operating Norms		
CUF	%	19%
Availability	%	100%
Auxiliary Consumption	%	0.00%
Transformation Losses	%	0.00%
Transmission losses		0.70%
O&M Expenses	Rs. In Cr./MW	0.13
O&M Expenses w.r.t Capital Cost	%	
Annual Escalation Factor	%	5.72%
Tax		
Tax Rate	%	30.00%
MAT Rate	%	18.50%
Surcharge		5.00%
Cess Rate		3.00%
Effective ROE after 10 Years		22.00%
Effective ROE for Initial 10 Years		19.00%
80IA Exemption	Years	10
Working Capital Norms		
Receivables	Months	2
Spares	% of O&M Cost	15%
Escalation Factor for Spares	%	0%
O&M Expenses	Months	1
Interest on Working Capital	%	13.50%
Discount Factor	%	10.42%
Depreciation amount		90.00%
Book Depreciation rate		5.28%
Tax Depreciation rate		80.00%
Income Tax (MAT)		20.00%
Income Tax (Normal Rates)		33.99%

Determination of Tariff for Solar PV Project above 1 MW to 5 MW

Years		Y 01	Y 02	Y 03	Y 04	Y 05	Y 06	Y 07	Y 08	Y 09	Y 10	Y 11	Y 12	Y 13	Y 14	Y 15	Y 16	Y 17	Y 18	Y 19	Y 20	Y 21	Y 22	Y 23	Y 24	Y 25
Gross Generation (MU)		1.664	1.664	1.664	1.669	1.664	1.664	1.664	1.669	1.664	1.664	1.664	1.669	1.664	1.664	1.664	1.669	1.664	1.664	1.664	1.669	1.664	1.664	1.664	1.669	1.664
Net Generation (MU)		1.664	1.664	1.664	1.669	1.664	1.664	1.664	1.669	1.664	1.664	1.664	1.669	1.664	1.664	1.664	1.669	1.664	1.664	1.664	1.669	1.664	1.664	1.664	1.669	1.664
Transmission Losses @ 0.7% (MU)		0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Saleable Energy (MU)		1.653	1.653	1.653	1.657	1.653	1.653	1.653	1.657	1.653	1.653	1.653	1.657	1.653	1.653	1.653	1.657	1.653	1.653	1.653	1.657	1.653	1.653	1.653	1.657	1.653
Power Available for sale		1.653	1.653	1.653	1.657	1.653	1.653	1.653	1.657	1.653	1.653	1.653	1.657	1.653	1.653	1.653	1.657	1.653	1.653	1.653	1.657	1.653	1.653	1.653	1.657	1.653
Fixed Cost (Rs. Crores)																										
RoE		0.354	0.354	0.354	0.354	0.354	0.354	0.354	0.354	0.354	0.354	0.410	0.410	0.410	0.410	0.410	0.410	0.410	0.410	0.410	0.410	0.410	0.410	0.410	0.410	0.410
Depreciation		0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096	0.096
O&M		0.130	0.137	0.145	0.154	0.162	0.172	0.182	0.192	0.203	0.214	0.227	0.240	0.253	0.268	0.283	0.299	0.317	0.335	0.354	0.374	0.395	0.418	0.442	0.467	0.494
WC Interest		0.035	0.035	0.034	0.034	0.033	0.032	0.032	0.031	0.031	0.030	0.031	0.031	0.025	0.026	0.027	0.028	0.029	0.030	0.031	0.032	0.033	0.034	0.036	0.037	0.038
Interest on long Term loans		0.542	0.494	0.447	0.400	0.353	0.306	0.259	0.212	0.165	0.118	0.071	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total Fixed Cost (incl tax)		1.423	1.383	1.343	1.303	1.265	1.226	1.188	1.151	1.115	1.079	1.101	1.066	0.784	0.800	0.816	0.833	0.851	0.870	0.890	0.911	0.934	0.958	0.983	1.010	1.038
Total Cost of Generation		1.423	1.383	1.343	1.303	1.265	1.226	1.188	1.151	1.115	1.079	1.101	1.066	0.784	0.800	0.816	0.833	0.851	0.870	0.890	0.911	0.934	0.958	0.983	1.010	1.038
Levelized Tariff (CoG)																										
Discount Rate																										
Discounting Factor		1.000	0.906	0.820	0.743	0.673	0.609	0.552	0.500	0.452	0.410	0.371	0.336	0.304	0.276	0.250	0.226	0.205	0.185	0.168	0.152	0.138	0.125	0.113	0.102	0.093
RoE	2.25	2.142	1.940	1.756	1.586	1.441	1.305	1.181	1.067	0.969	0.877	0.920	0.831	0.755	0.683	0.619	0.559	0.508	0.460	0.416	0.376	0.341	0.309	0.280	0.253	0.230
Depreciation	1.80	2.191	1.984	1.796	1.622	1.473	1.334	1.208	1.091	0.991	0.897	0.813	0.734	0.176	0.160	0.145	0.131	0.119	0.107	0.097	0.088	0.080	0.072	0.065	0.059	0.054
O&M	1.26	0.787	0.753	0.721	0.688	0.661	0.633	0.606	0.578	0.555	0.532	0.509	0.486	0.467	0.447	0.428	0.408	0.392	0.375	0.359	0.343	0.329	0.315	0.302	0.288	0.277
WC Interest	0.19	0.214	0.190	0.169	0.150	0.134	0.119	0.106	0.095	0.085	0.076	0.070	0.063	0.046	0.043	0.041	0.038	0.036	0.033	0.031	0.029	0.027	0.026	0.024	0.023	0.022
Interest on long Term loans	1.55	3.277	2.709	2.220	1.794	1.437	1.128	0.864	0.639	0.451	0.292	0.159	0.048	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total Cost	7.05	8.610	7.576	6.663	5.841	5.146	4.519	3.966	3.470	3.051	2.674	2.471	2.162	1.444	1.333	1.232	1.136	1.054	0.976	0.904	0.836	0.778	0.723	0.672	0.623	0.581

