

Business Proposal for Solar Technology Services

Scope

It has been more than a decade since Pakistan is experiencing dire energy shortage which has affected industry, agriculture, businesses, travel industry, consumers, all equally and tragically. With ever increasing demand from the growing population, the energy experts around the world have emphasized on exploring the renewable energy resources and shifting the burden from non-renewable and mineral resources. Pakistan naturally receives sunlight almost 10 months a year, the potential for converting solar energy to other forms of energy is gigantic. Government of Pakistan itself has started developing solar model projects all over Pakistan. An industrial surge in this field is expecting in near future hence the need for skill training is highly justified and needed.

Business Route

The loan beneficiaries who wish to start up a venture related to solar technology will be imparted with trainings in the areas of Photovoltaics, Solar Water Heating and Solar Panel Installation. Emphasize will primarily be laid on practical trainings where TUSDEC will be training the beneficiaries as solar technicians to open up their own small scale businesses (service shops). Beneficiaries will be made aware of the most propelling and international quality solar equipment for its installation, repair and maintenance for domestic as well as industrial plants. Basic business administration skills, advisory on vendor relations and identification of prospective geographic areas for setting up business units will be imparted. Consultancy to prepare an operational and financial feasibility will also be extended.

Training Duration

8 Weeks

Setting up the Business

This business can be setup within a period of one month with the following resources:

1. HR Requirements:

The business of a solar service/technician shop can be set up by 1 skilled and 2 semi-skilled workers at least.

2. Equipment List:

Sr.#	Equipment Name
1	PV Panels
2	Batteries
3	Charge Controller
4	Inverters
5	Solar UPS
6	Cables
7	Connectors

3. Tentative Cost Structure: (Capital and Operational Cost for a year)

Sr.#	Item	Cost (Rs.)
1	Shop Rent	300,000
2	Equipment and Tools	550,000
3	Overhead setup cost	1200,000
	Total Capital Expenditure	970,000
4	Staff Salary	350,000
5	Consumables	100,000
6	Utilities	180,000
7	Other operational Cost	100,000
	Total Operational Cost	730,000
	Total Cost	1,700,000

Services to be Provided

After equipping loan and training assistance, the beneficiaries will be able to set up a small service shop dealing in solar power expertise. He will be able to provide the following assistance:

- Purchasing appropriate equipment
- Installation of equipment
- Repair and Maintenance of equipment
- On-the-job training to unskilled/semi-skilled workers

Future Prospects

The entrepreneur is expected to earn Rs. 300,000 in the first year of investment, Rs. 375,000 in the second year, and with an expected growth of 10% every successive year, he will be able to earn increasing profits which in return will give him good prospects to expand the business. The entrepreneur in future can also start investing the accumulated profits in solar products trading.

Detailed Loan Repayment Schedule:

Financial Assumptions:

Project Life (years)	8
Interest rate (p.a.)	8.00%
Payments per Year	12
Principal amount for Year1	0

Summary of Loan Repayment and Expected Profit Earned:

Repayment	Years							
	1	2	3	4	5	6	7	8
Principal	0	188,781	204,450	221,419	239,797	259,700	281,255	304,599
Interest	136,000	129,178	113,509	96,540	78,162	58,259	36,704	13,360
Total Repayment	136,000	317,959	317,959	317,959	317,959	317,959	317,959	317,959
Minimum Earning to Cover Loan amount	8%	18.7%	18.7%	18.7%	18.7%	18.7%	18.7%	18.7%
Expected Return %	25.6%	40.8%	43.7%	49.0%	54.0%	59.9%	65.8%	71.6%
Expected Return Amount	436,000	692,959	742,959	832,959	917,959	1,017,959	1,117,959	1,217,959
Net Profit	300,000	375,000	425,000	515,000	600,000	700,000	800,000	900,000

Note:

On an initial investment of Rs. 1,700,000, it is expected that the small solar service shops will sprout net profit worth of Rs. 300,000 in year 1. The above calculations are true if financial assumptions hold true and economy does not experience any unforeseen risks.

For entrepreneurs carrying out the same business ventures with less/more investment or with partnership investment (personal investment plus loan) than customized feasibilities will be made for assisting such beneficiaries.

Detailed Interest Payment Schedule:

Time (months)	Balance	Principal Repayment	Interest	Monthly Installment	Principal Payable
1	1,700,000	0	11,333	11,333	1,700,000
2	1,700,000	0	11,333	11,333	1,700,000
3	1,700,000	0	11,333	11,333	1,700,000
4	1,700,000	0	11,333	11,333	1,700,000
5	1,700,000	0	11,333	11,333	1,700,000
6	1,700,000	0	11,333	11,333	1,700,000
7	1,700,000	0	11,333	11,333	1,700,000
8	1,700,000	0	11,333	11,333	1,700,000
9	1,700,000	0	11,333	11,333	1,700,000
10	1,700,000	0	11,333	11,333	1,700,000
11	1,700,000	0	11,333	11,333	1,700,000
12	1,700,000	0	11,333	11,333	1,700,000
13	1,700,000	15,163	11,333	26,497	1,684,837
14	1,684,837	15,264	11,232	26,497	1,669,572
15	1,669,572	15,366	11,130	26,497	1,654,206
16	1,654,206	15,469	11,028	26,497	1,638,738
17	1,638,738	15,572	10,925	26,497	1,623,166
18	1,623,166	15,675	10,821	26,497	1,607,491
19	1,607,491	15,780	10,717	26,497	1,591,711
20	1,591,711	15,885	10,611	26,497	1,575,826
21	1,575,826	15,991	10,506	26,497	1,559,835
22	1,559,835	16,098	10,399	26,497	1,543,737
23	1,543,737	16,205	10,292	26,497	1,527,532
24	1,527,532	16,313	10,184	26,497	1,511,219
25	1,511,219	16,422	10,075	26,497	1,494,797
26	1,494,797	16,531	9,965	26,497	1,478,266
27	1,478,266	16,641	9,855	26,497	1,461,624
28	1,461,624	16,752	9,744	26,497	1,444,872
29	1,444,872	16,864	9,632	26,497	1,428,008
30	1,428,008	16,977	9,520	26,497	1,411,031
31	1,411,031	17,090	9,407	26,497	1,393,942
32	1,393,942	17,204	9,293	26,497	1,376,738
33	1,376,738	17,318	9,178	26,497	1,359,420
34	1,359,420	17,434	9,063	26,497	1,341,986
35	1,341,986	17,550	8,947	26,497	1,324,436
36	1,324,436	17,667	8,830	26,497	1,306,769
37	1,306,769	17,785	8,712	26,497	1,288,984
38	1,288,984	17,903	8,593	26,497	1,271,081
39	1,271,081	18,023	8,474	26,497	1,253,058

Time (months)	Balance	Principal Repayment	Interest	Monthly Installment	Principal Payable
40	1,253,058	18,143	8,354	26,497	1,234,915
41	1,234,915	18,264	8,233	26,497	1,216,652
42	1,216,652	18,386	8,111	26,497	1,198,266
43	1,198,266	18,508	7,988	26,497	1,179,758
44	1,179,758	18,632	7,865	26,497	1,161,126
45	1,161,126	18,756	7,741	26,497	1,142,371
46	1,142,371	18,881	7,616	26,497	1,123,490
47	1,123,490	19,007	7,490	26,497	1,104,483
48	1,104,483	19,133	7,363	26,497	1,085,350
49	1,085,350	19,261	7,236	26,497	1,066,089
50	1,066,089	19,389	7,107	26,497	1,046,700
51	1,046,700	19,519	6,978	26,497	1,027,181
52	1,027,181	19,649	6,848	26,497	1,007,533
53	1,007,533	19,780	6,717	26,497	987,753
54	987,753	19,912	6,585	26,497	967,841
55	967,841	20,044	6,452	26,497	947,797
56	947,797	20,178	6,319	26,497	927,619
57	927,619	20,312	6,184	26,497	907,307
58	907,307	20,448	6,049	26,497	886,859
59	886,859	20,584	5,912	26,497	866,275
60	866,275	20,721	5,775	26,497	845,553
61	845,553	20,860	5,637	26,497	824,694
62	824,694	20,999	5,498	26,497	803,695
63	803,695	21,139	5,358	26,497	782,556
64	782,556	21,280	5,217	26,497	761,277
65	761,277	21,421	5,075	26,497	739,856
66	739,856	21,564	4,932	26,497	718,291
67	718,291	21,708	4,789	26,497	696,583
68	696,583	21,853	4,644	26,497	674,731
69	674,731	21,998	4,498	26,497	652,732
70	652,732	22,145	4,352	26,497	630,587
71	630,587	22,293	4,204	26,497	608,295
72	608,295	22,441	4,055	26,497	585,853
73	585,853	22,591	3,906	26,497	563,263
74	563,263	22,741	3,755	26,497	540,521
75	540,521	22,893	3,603	26,497	517,628
76	517,628	23,046	3,451	26,497	494,582
77	494,582	23,199	3,297	26,497	471,383
78	471,383	23,354	3,143	26,497	448,029
79	448,029	23,510	2,987	26,497	424,519
80	424,519	23,666	2,830	26,497	400,853

Time (months)	Balance	Principal Repayment	Interest	Monthly Installment	Principal Payable
81	400,853	23,824	2,672	26,497	377,029
82	377,029	23,983	2,514	26,497	353,046
83	353,046	24,143	2,354	26,497	328,903
84	328,903	24,304	2,193	26,497	304,599
85	304,599	24,466	2,031	26,497	280,133
86	280,133	24,629	1,868	26,497	255,504
87	255,504	24,793	1,703	26,497	230,711
88	230,711	24,958	1,538	26,497	205,752
89	205,752	25,125	1,372	26,497	180,627
90	180,627	25,292	1,204	26,497	155,335
91	155,335	25,461	1,036	26,497	129,874
92	129,874	25,631	866	26,497	104,243
93	104,243	25,802	695	26,497	78,441
94	78,441	25,974	523	26,497	52,468
95	52,468	26,147	350	26,497	26,321
96	26,321	26,321	175	26,497	0

For detailed business plan, Please contact our help desk