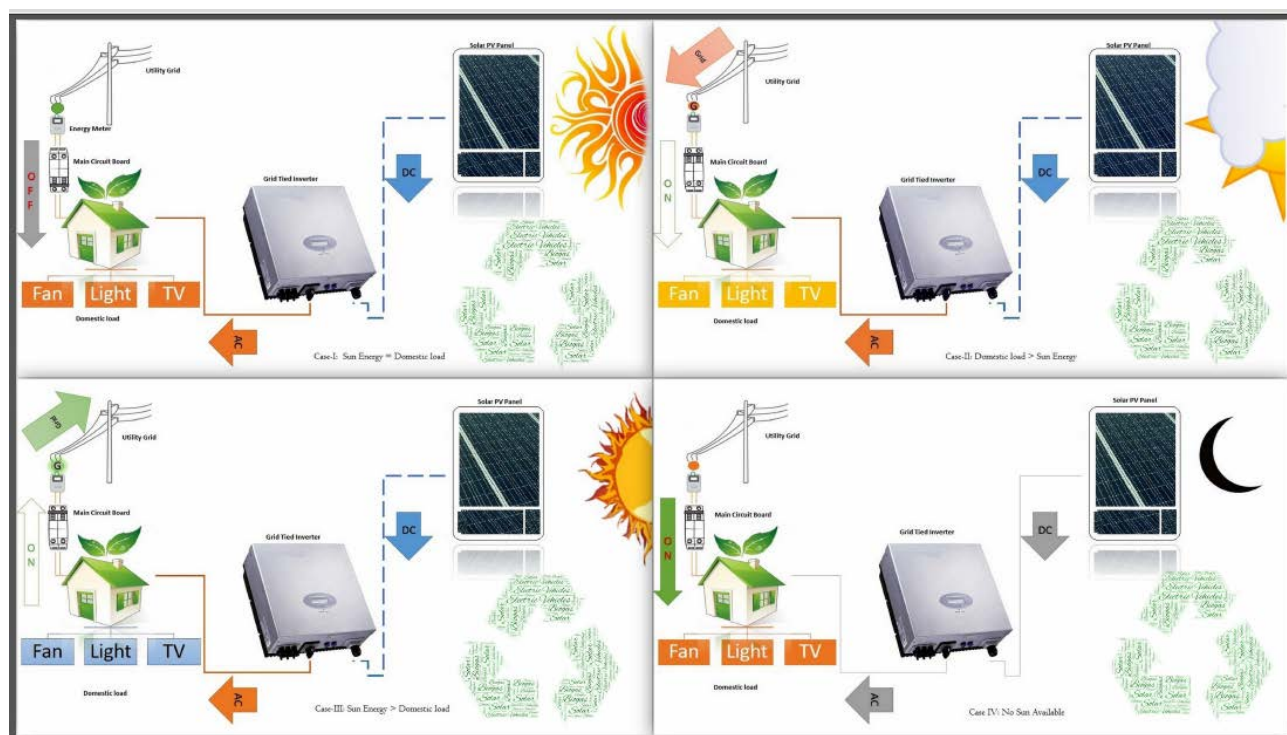


Solar Grid connect

PRODUCT GUIDE



Your Solar Proposal Summary

Proposal for:

•Rooftop Solar PV system

Provided by:

•Shaktisteller Energy Solutions Pvt. Ltd.

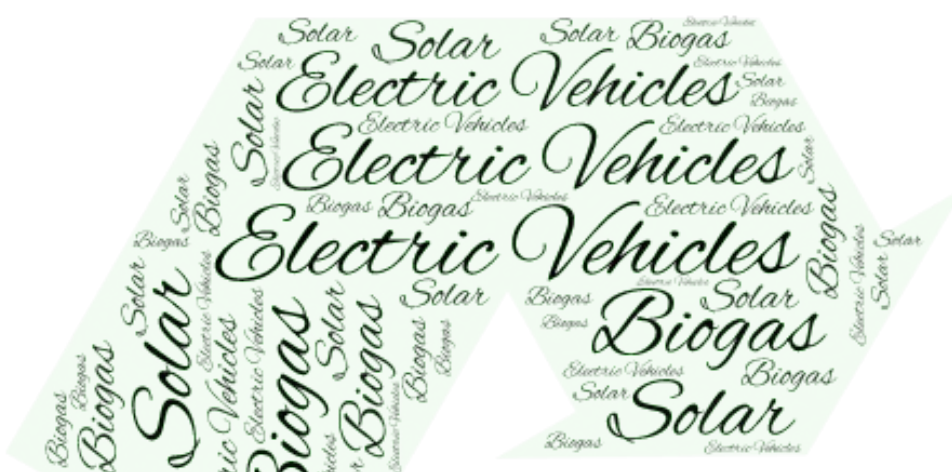
System:

•Grid-Tied Solar PV System with 5 years of service, maintenance and EB adjustment.

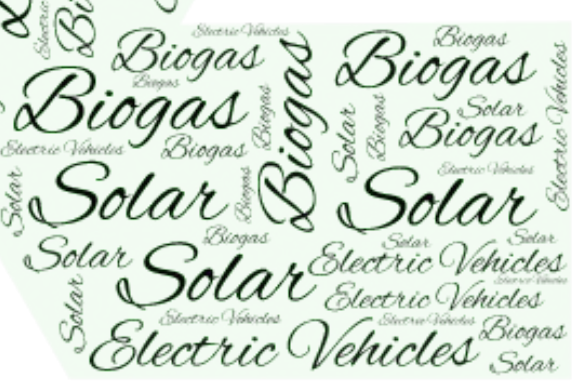
Winner of 2019 Scotland-India Impact Link Social Enterprise Award
2019 state leadership award by Solar Roofs



This quotation is for the supply & Installation of a solar power system (all-Inclusive) and is for the Intended recipient only. Should you have any questions or concerns please contact us.



THIS PROPOSAL CONTAINS PROPRIETARY AND CONFIDENTIAL INFORMATION OF SHAKTISTELLER ENERGY SOLUTIONS PVT. LTD. AND SHALL NOT BE USED, DISCLOSED OR REPRODUCED, IN WHOLE OR IN PART, FOR ANY PURPOSE OTHER THAN TO EVALUATE THIS PROPOSAL, WITHOUT THE PRIOR WRITTEN CONSENT OF SHAKTISTELLER ENERGY SOLUTIONS PVT. LTD. TITLE IN AND TO THIS DOCUMENT AND ALL INFORMATION CONTAINED HEREIN REMAINS AT ALL TIMES IN SHAKTISTELLER ENERGY SOLUTIONS PVT. LTD.



What Should You Look For In A Solar Company?

Accuracy For Your System

- Any company pitching to you a proposal to install a major piece of equipment which is meant to lower your power bills should also be able to give you an accurate projection of figures that you can rely on before making a decision.

A Company Who Can Demonstrate Your Solar Energy Will Mostly Be Used On-Site

- Using your solar energy is important! It's what dictates a good investment from a mediocre investment. If you make a poor choice then the solar system you choose to install may be too large for your needs or might not fit in with your consumption pattern. So a solar company who can demonstrate how a solar energy system will interact with your current use is a company you can trust. We at *Shaktisteller* perform a complete energy audit before installing a system.

A Company With Experience

- It almost goes without saying that experience is highly important in any type of business. Nobody wants to buy from the company who hasn't had a wealth of experience. The solar company you choose should be able to demonstrate that they have experience installing systems similar to the one they propose to sell to you, with more than **400+ kW** installed capacity, **55 Mwhr of electrical energy** and reduced **51 Tons of CO₂ emission** *Shaktisteller* brings experience with technology.

A Company With Happy Customers

- Clearly a solar company who has many happy customers is a safer bet than a company whose customers are invisible. You can always check *Shaktisteller* for customer reviews of the company before putting pen to paper and committing to buy a solar system.

A Company That Provides Service

- Solar photovoltaic systems are highly technical in nature, particularly when interoperated with the grid. A company that can handle unpredictability is always a safer bet. At *Shaktisteller*, in-house operations and maintenance team provides a customer service that is un-paralled in the industry.

Why Choose Shaktisteller Energy Solutions Pvt. Ltd.?

Our happy customers



Dr. R K Pande, 3 kW Lalghati



Holy Family School, 20 kW Airport Road



Mr. Vennel Joseph, 2.5 kW Danish Kunj



Mr. Sudhir Shukla, 4 kW Shahapura



Mr. Sanjay Pradhan, 6 kW Akrity



Mr. K C Jijotiya, 3 kW Awadhपुरi



Mr. Mahim Lal, 5 kW Nehru Nagar



Mr. R S Yadav, 5 kW Bhartiniketan



Waree, 15 kW Obdullaganj



Mr. Dhires Nigam, 10 kW Shahapura



Mr. Jaipal Singh, 5 kW Bharat Nagar



Dr. D K Kodwani, 5 kW Saket Nagar



Mr. Rajesh Naik, 5 kW Chunabhathi



Mrs. Prity Jain, 3 kW, Kasturba Nagar



Mr. Aditya Modi, 2 kW TT Nagar



Mr. Kailash Narayan, 3 kW Chunabhathi



Mr. R D Singh, 3 kW Saket Nagar



Mr. Sudhir Shukla, 2.5 kW Awadhपुरi



Mr. Gaurav Agarwal, 3 kW Rohit Nagar



Mr. C B Chansoliya, 3 kW M P Nagar



Mr. Kunal Dugvegar, 2.5 kW Awadhपुरi



Mr. G P Mehra, 3 kW Char Imli



Mr. Kamlesh Gupta, 4 kW Awadhपुरi



Mr. B L Uikey, 2.5 kW Awadhपुरi



Mr. Kailash Raghuvanshi, 3 kW Vidisha



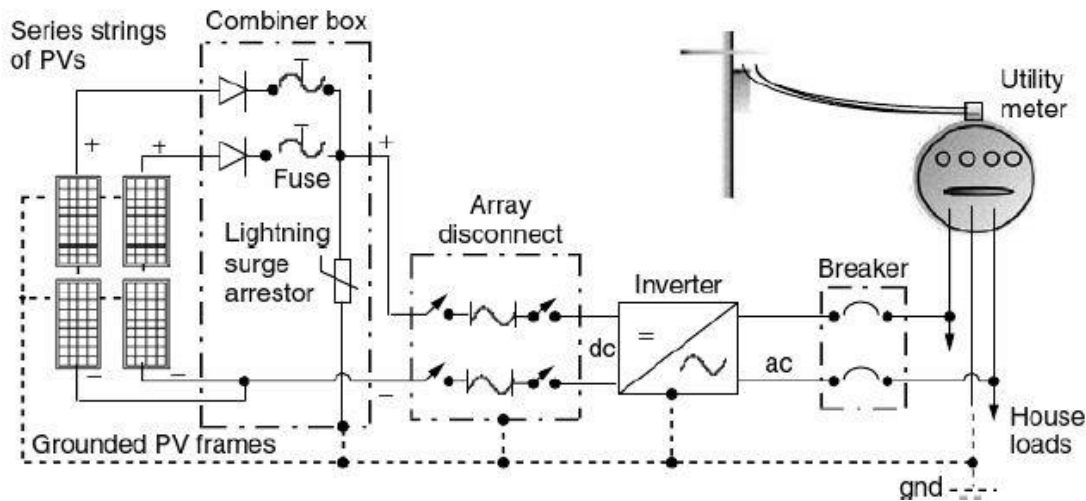
Mr. J B Rai, 2 kW Gopal Nagar



Mr. C M Sirsyam, 4 kW Saket Nagar

5 years of faultless operations

A solar PV grid connect system includes various components, but you don't need to bother, we will ensure the smooth operation of your system.



Opt for extended warranties & services

No need to fret after the warranty period is over. Your extended services are just one click away.

Sr. No.	Component	Warranty (In Years)
1	Solar modules	<u>10 Year Product Warranty and 25 years Power output</u>
2	Inverter	5 Years
3	Module Mounting Structure	5 Years
4	Other BOS	As per Original Equipment Manufacture warranty terms

Note: Shaktisteller ESPL will provide all back to back warrantees as provided by the OEM. Extended Warrantees if required shall be charged extra.

**Operation & maintenance INR 1% of project /Year after 5th year with 5% escalation y-o-y.*

**Free for first five years.*

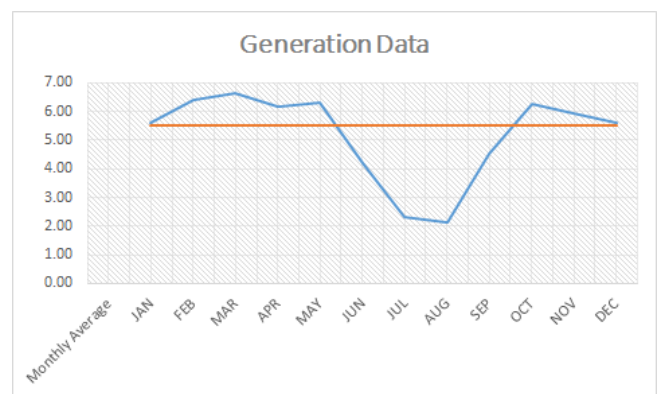
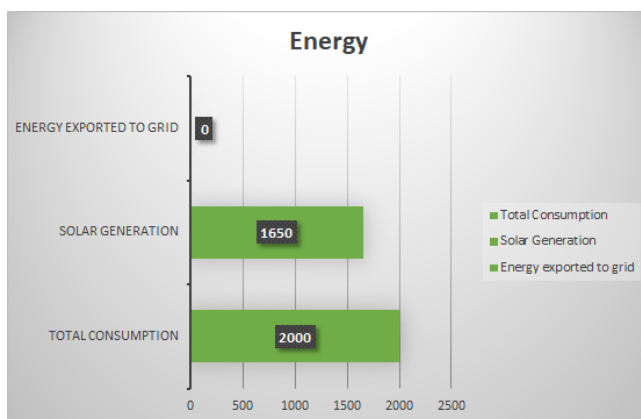
Year	PPA cost	Unit cost of energy (Tariff)	Solar Generation (Yearly)	Self consumption (Yearly)	Energy sent to grid	Income from net metering scheme	Gross reduction in utility bill	Annual Instalment	Savings
1	₹ 2.97	₹ 7.00	₹ 19,800.00	24000.00	0.00	₹ -	₹ 138,600.00	₹ -	₹ 135,282.52
2	₹ 2.97	₹ 7.63	₹ 19,800.00	24000.00	0.00	₹ -	₹ 151,074.00	₹ -	₹ 147,756.52
3	₹ 2.97	₹ 8.32	₹ 19,800.00	24000.00	0.00	₹ -	₹ 164,670.66	₹ -	₹ 161,353.18
4	₹ 2.97	₹ 9.07	₹ 19,800.00	24000.00	0.00	₹ -	₹ 179,491.02	₹ -	₹ 176,173.54
5	₹ 2.97	₹ 9.88	₹ 19,800.00	24000.00	0.00	₹ -	₹ 195,645.21	₹ -	₹ 192,327.73
6	₹ 2.97	₹ 10.77	₹ 19,800.00	24000.00	0.00	₹ -	₹ 213,253.28	₹ -	₹ 209,935.80

Example Chart Showing Year on Year savings for a period of six years for a 10 kW system

What Will Solar Power Do For Your Business?

Our Assessment

We have assumed a monthly consumption of 80% of the plant capacity for a recommended 10 kW solar power system. Below are some charts outlining what our proposed solar power systems will do for your premises.



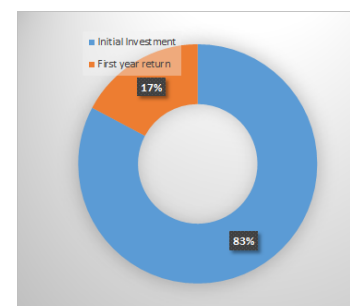
Your new energy system:

Switching to solar means your new energy system. Some of your power will come directly from the sun. Both in terms of energy balance and cost of energy you will effectively adopt when you move with **Shaktisteller's** proposal.

80% of your total energy will be supplied by solar (worth ₹ 13,305.16 / month).

Say goodbye to your old power bill:

Monthly Average		Generation	Consumption	Net	Bill %
JAN	5.60	1,680.84	2,000.00	319.16	84.04%
FEB	6.39	1,918.20	2,000.00	81.80	95.91%
MAR	6.63	1,989.96	2,000.00	10.04	99.50%
APR	6.15	1,846.44	2,000.00	153.56	92.32%
MAY	6.33	1,898.88	2,000.00	101.12	94.94%
JUN	4.20	1,258.56	2,000.00	741.44	62.93%
JUL	2.32	695.52	2,000.00	1,304.48	34.78%
AUG	2.13	637.56	2,000.00	1,362.44	31.88%
SEP	4.51	1,352.40	2,000.00	647.60	67.62%
OCT	6.26	1,876.80	2,000.00	123.20	93.84%
NOV	5.92	1,777.44	2,000.00	222.56	88.87%
DEC	5.60	1,680.84	2,000.00	319.16	84.04%



SCOPE OF WORK

The Scope of Work shall include the following:

- Conceptualization, Design, supply and installation of Solar PV System.
- Detailed planning for smooth execution of the project.
- Warranty of the system for 5 year faultless operation.
- After sales services including net meter bill adjustment;
- Power purchase agreement signing and performance monitoring.
- Maintaining proper output of the system till maintenance period.

SYSTEM DESCRIPTION

The Solar Photovoltaic (PV) modules convert solar radiation from the sun into electrical energy in the form of direct current (DC). The Solar inverter then maximizes the use of this electrical energy and utilization is based according to the connected load.

The power generated from the PV Modules will be supplied to the load through solar inverter unit (part of PCU), which converts DC to AC sine wave. The inverter is designed for catering the power needs of the load. All equipment follow standard codes as defined in Annex-I.

The system comprises of the following components:

1. Solar Module
2. Module Mounting Structures
3. Power Conditioning Unit (Inverter)
4. Cables & Installation Kit
5. Net meter with testing certificate from electricity board

FINANCIAL TERMS

1. **Purchase Order to be placed on :** SHAKTISTELLER ENERGY SOLUTIONS
2. **GST :** 5% Inclusive
3. **Transportation :** Inclusive.
4. **Installation :** Inclusive.
5. **All Products/Components :** MNRE, BIS, IEC Certified
6. **Delivery :** 1-3 Weeks.
7. **Performance Warranty :** 25 Years – PV Panel, 5 Years – Inverter
8. **Payment :** 25% Advance with Purchase Order, 45% Before Dispatch, 30% after completion of net metering.
9. **Costing :** 55 Rs. per watt + metering charges at actual as per meter requirement.

We provide entire system along with all the required liasioning in a single package. Our dedicated operations and maintenance team maintains a 24 x 7 one-call service and attends to any/all system issues at all periods of time. Performance monitoring and maintenance of the system act as a distinguished feature of our product and services.

SERVICES PROVIDED

1. SSE Technical Support Service

Shaktisteller SSE Technical Support provides remote technical assistance for issues associated with the operation and maintenance of Covered sites. Customers have telephone and web access to Shaktisteller's Technical support personnel, 12 hrs. a day, 365 days a year to report problems, ask solar-related questions and receive assistance for installed hardware (Commissioning certificate and warranty card will be issued covering relevant hardware) .

2. SSE Return to Factory Repair Service

Shaktisteller SSE Return to Factory Repair Service provides technical support plus return to factory replacement of a defective Field Replaceable Unit (FRU) with an equivalent FRU for Covered Products in cases where the installation has been carried out by SSE. In case of a hardware not initially installed by SSE, a joint inspection and co-operation is bound to be expected for an FRU to be replaced.

3. SSE Advance Replacement Services

Shaktisteller SSE Advance Replacement Services provide technical support plus advanced part replacement for Covered Products. Upon diagnosis of a reported failure, the replacement part will be delivered within the response time defined by the nature of the problem and as in the inspection report.

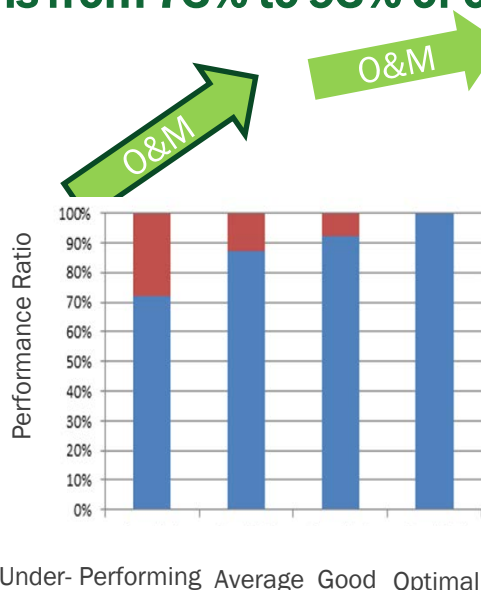
4. SSE On-Site Services

Shaktisteller SSE Onsite Services provide technical support plus advanced parts replacement with on-site labor for Covered Products. Upon diagnosis of a reported failure, the replacement part and an on- site field technician will arrive within the response time defined by the inspection report.

5. SSE Maintenance Support Service

Shaktisteller SSE Maintenance Support provides regular maintenance of the Covered sites. Maintenance include removal of dust and regular debris from the solar panels, periodic checking of the hardware to identify loose connections and possible disconnect/failure. Periodic checking of the module mounting structure and maintenance in case of loose structure footing, scratches on the GI coating, removal of rust and tightening of nuts/bolts. Frequency of the maintenance as per the selection of service category defined in the document.

Comprehensive O&M could improve delivery of underperforming systems from 73% to 93% of optimal



Optimal (100%)

- Full robust quality assurance system in planning and construction phases
- Comprehensive asset management
- Good preventative O&M
- Good corrective O&M

Average Performance Ratio Increases from 88% to 94%

ANNEX-I

CGS[fk lã` fch^adWlaXEBHðkfW eSUadM]` Yfa
 `?;@,FDKA8@7I 3@6 D7@7I 34>77@7D9K@AF;8;53F;A@@W6WZlfZW%IZ? SId S'##`

SCHEDULE

Sl. No.	Product	Indian Standard Number	Title of Indian Standard	Date of Implementation
(1)	(2)	(3)	(4)	(5)
1.	Crystalline Silicon Terrestrial Photovoltaic (PV) Modules (Si wafer based)	IS 14286 : 2010	Crystalline Silicon Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval	16th April 2018
2.	Thin-Film Terrestrial Photovoltaic (PV) Modules (a-Si, CIGs and CdTe)	IS 16077 : 2013	Thin-Film Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval	16th April 2018
3.	PV Module (Si wafer and Thin film)	IS/IEC 61730 (Part 1) : 2004 IS/IEC 61730 (Part 2) : 2004	Photovoltaic (PV) Module Safety Qualification Part 1 Requirements for Construction Photovoltaic (PV) Module Safety Qualification Part 2 Requirements for Testing	16th April 2018 (without fire test) 1st July 2018 (with fire test)
4.	Power Inverter for use in photovoltaic power system	IS 16221 (Part 1) : 2016	Safety of Power Converters for use in Photovoltaic Power Systems Part 1- General Requirements Safety of Power Converters	16th April 2018 (for inverters up to and including 100 kW)
		IS 16221 (Part 2) : 2015	for Use in Photovoltaic Power Systems Part 2- Particular Requirements for Inverters	1st October 2018 (for inverters above 100 kW)
5.	Utility – Interconnected Photovoltaic inverters	IS 16169: 2014	Test Procedure of Islanding Prevention Measures for Utility- Interconnected Photovoltaic Inverters	16th April 2018 (for inverters up to and including 100 kW) 1st October 2018 (for inverters above 100 kW)
6.	Storage battery	IS 16270	Secondary Cells and Batteries for Solar Photovoltaic Application General- Requirements and Methods of Test	16th April 2018

WHY GO SOLAR?

Product Guide

SSE-OG-1K



1 kilo Watts solar panel
1 kVA single phase grid tie inverter
AC/DC Distribution Box
Cable & Accessories
Mounting Structure

Maintenance free
System life 25 years
1500 units per year generation
4-5 units per day
Demo Unit.

SSE-OG-2K



2 kilo Watts solar panel
2 kVA single phase grid tie inverter
AC/DC Distribution Box
Cable & Accessories
Mounting Structure

Maintenance free
System life 25 years
3000 units per year generation
8-10 units per day
1,25,000/-

SSE-OG-3K



3 kilo Watts solar panel
3 kVA single phase grid tie inverter
AC/DC Distribution Box
Cable & Accessories
Mounting Structure

Maintenance free
System life 25 years
4500 units per year generation
12-15 units per day
1,73,250/-

SSE-OG-4K



4 kilo Watts solar panel
4 kVA single phase grid tie inverter
AC/DC Distribution Box
Cable & Accessories
Mounting Structure

Maintenance free
System life 25 years
6000 units per year generation
16-20 units per day
2,35,000/-

SSE-OG-5K



5 kilo Watts solar panel
5 kVA single phase grid tie inverter
AC/DC Distribution Box
Cable & Accessories
Mounting Structure

Maintenance free
System life 25 years
7500 units per year generation
20-25 units per day
2,75,000/-

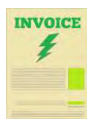
HEALTHY RETURN ON INVESTMENT

Solar typically will perform far better than money in the bank.



INCREASE BUSINESS PROFITABILITY

Improve business value



GREEN MARKETING

Generate Publicity
Improve Customer Loyalty



YOUR ENERGY FREEDOM

Independence from Power Companies
Your own free energy From the sun



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w: www.shaktisteller.com
e: shaktisteller@yahoo.com

Information in this proposal:

Does not constitute financial product advice;

Is of a general nature only, is for illustrative purposes only and does not take into account any given individual's objectives, financial situation or needs;

Should not be used, relied upon, or treated as a substitute for specific professional advice. **Shaktisteller energy solutions pvt. Ltd.** recommends that you obtain your own independent professional advice before making any decision in relation to your particular requirements or circumstances;

Is based upon many inputs beyond the control of **SSESPL** and you must review the inputs to ensure they accurately reflect your circumstances;

Including the outputs, forecasts, predictions and other analyses are based upon your solar system operating highly efficiently and optimally. In practice, the system of any given energy customer may perform less efficiently or optimally;

And the accuracy of comparative outputs, forecasts and predictions is dependent on details appearing in the energy customer's bill being correct and the subsequent correct entry of details by third parties over which **Shaktisteller ESPL** has no control;

Is provided subject to the acknowledgment that the person generating the report has the ability to manipulate or over-ride certain variables on which modelling is based, including those relating to system performance;

Is subject to the fact that outcomes may be significantly affected by factors such as the amount of sunlight in any given period and whether the power is to be consumed at your site or exported;

Shows costs and benefits calculated on an annual basis. If there are some part-year benefits (e.g. feed-in tariff ending) then these are considered to be full-year benefits, which can slightly overstate the financial benefit to you.
