PREPARED FOR	PREPARED BY

3 *kg* Kitchen Waste Based Biogas Plant

PROPOSAL

Your Solar Proposal Summary*

Proposal for:

•3 kg kitchen waste based biogas system

Provided by:

•Shaktisteller Energy Solutions Pvt. Ltd.

Total Investment (including GST):

•₹ 41, 000/-

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 Renewable Energy 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 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

- Using your biogas unit is important! It's what dictates a good investment from a mediocre investment. If you make a poor choice then the system you choose to install may or might not fit in with your consumption pattern. So a company who can demonstrate how a biogas system will interact with your current use is a company you can trust. We at *Shaktisteller* perform and demostrate a complete biogas unit 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 renewable energy company you choose should be able to demonstrate that they have experience installing systems similar to the one they propose to sell to you. **Shaktisteller is certified by SMERA and an MNRE channel partner.**

A Company With Happy Customers

- Clearly a renewable energy 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 biogas system.

A Company That Provides Service

- 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-parallel in the industry.

Why Choose Shaktisteller ?

Portable Biogas Solutions

Expert Bio-Energy support

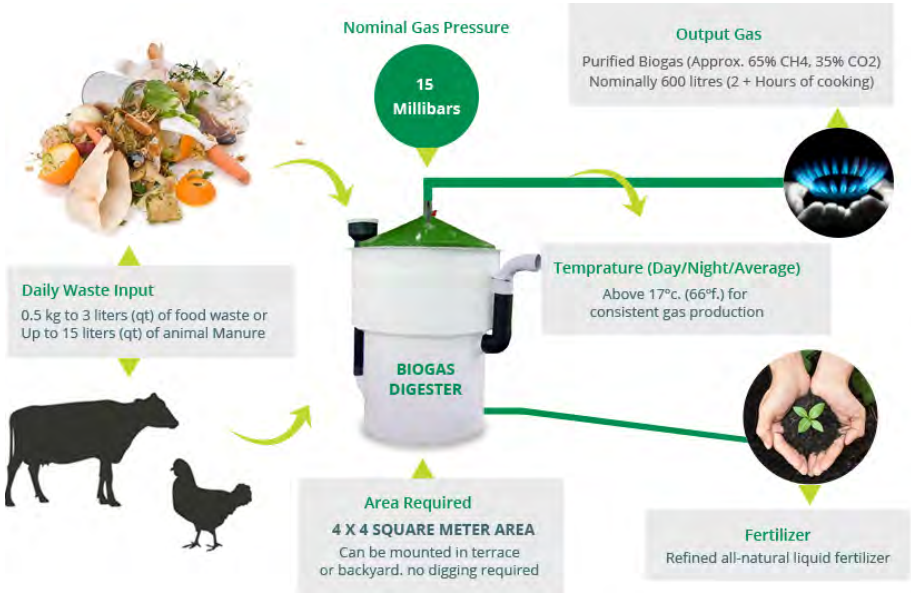
Our engineers have developed waste to energy products to "*allow the smooth adaptation of renewable energy*". This product converts your kitchen waste to usable cooking gas. A reasonable independance from LPG reduces your cost and increses productivity. What is more, the litter of this device can be used in your kitchen garden as bio fertilizer. Enjoy organic food with a complete sustainable home.

Best Economical Solution

Portable Biogas digesters are provided as a solution that not only helps manage wet waste in a safe and hygienic condition but also displace a family's LPG needs by half. With about 1.1 sqm space, they can be placed in balconies, terraces, backyards, basements and gardens. Larger units are available for apartment complexes, hotels, restaurants and office buildings with an option of converting gas into electricity. The lifespan of a digester is about 25 years.

Adhering to MNRE Compliance

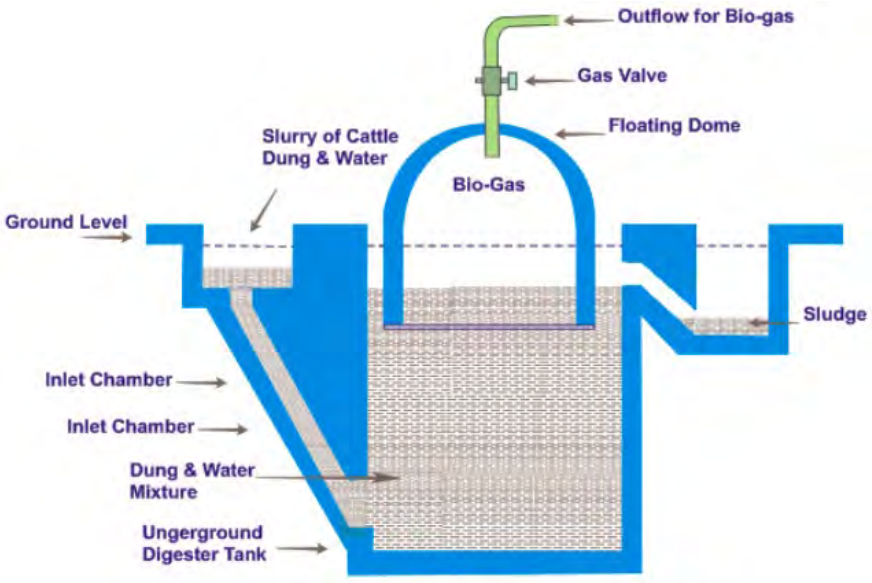
SSE energy solution product management & technical team operate alongside our suppliers on product quality and service, every component is carefully selected on its technical performance, longevity and warranty for a better customer experience. Certified by SMERA rating agency(National Small Industries Corporation Ltd. (NSIC)), SSESPL is a certified company that adheres to MNRE guidelines strictly giving you an hassle free experience.



Creating a Sustainable home: *Less waste, more re-use and recycling, together with lower life-cycle environmental impacts and costs, better reliability, less maintenance, and greater user satisfaction.*

5 years of faultless operations

A portable biogas system includes various components, but you don't need to bother, we will ensure the smooth operation of your system.



Components

1. Water inlet: The organic solid waste is mixed organic waste water in a 1:1 ratio to achieve a homogenous mixture. For obtaining the right bacteria to digest this waste, a one-time dumping of cow dung is required and the bacteria within is allowed to multiply.

2.Digestion chamber: Anaerobic decomposition takes place and methane gas rises within the chamber while the solid and liquid settle at the bottom

3. Floating dome: The gas rises into a fiber dome placed above the digestion chamber that constantly floats in a small pool of water. As the gas rises into the dome, the dome also rises and exerts pressure on the internal gas and slurry

4.Gas outlet & tube: The pressure from the dome causes the gas to pass through the gas outlet into a tube which is connected to a gas stove.

5. Slurry outlet: The solid and liquid waste that collects in the digestion chamber, rise into the slurry outlet and can be collected with a bucket.

What Will A Biogas System Do ?

Our Assessment

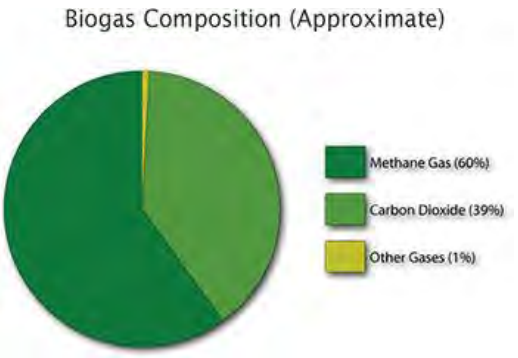
As per our assesment we recommend a 5 kg biogas system which will be a best fit solution for you. Below are some details outlining what our proposed systems will do for your institute/office.

TECHNICAL DETAILS OF 1 CUM FAMILY SIZE BIO WASTE TREATMENT PLANT

Waste Treatment Capacity	-	3 Kg Solid waste & 10 Litres of organic Waste Water 1000 Litres
Volume of Digester	-	Instute/Community
Suitable for	-	1.2 Sq Mtrs.
Space required for the installation	-	1 Cum Biogas
Gas generation per day	-	2.5 Hrs per day
Liquid fertilizer generation	-	10 Liter
1 Cum Biogas	-	0.5 Kg. LPG
Annual Biogas generation	-	Emission reduction of 3.5 tones CO_2 3.5 Credits / year

Our biogas plants can be constructed at individual houses, hotels/restaurants, industrial canteens, institutions, star hotels, college/school hostels, cattle farms, poultry farms, agricultural farms, where ever the bio waste is dumped. Our models have more advantage compared to conventional models.Our portable models can be placed without digging and can be even placed in terrace. Our biogas plants are known for the following features:

- Excellent Strength
- Completely made up of fiber reinforced plastic
- Expert Fabrication
- Long Life (life span upto 25 years)
- Small space consumption
- Completely portable
- Cost Effective
- Zero maintenance
- High gas output with small quantity of kitchen waste



SCOPE OF WORK

The Scope of Work shall include the following:

- *Conceptualization, Design, supply and installation of Biogas System.*
- *Detailed planning for smooth execution of the project.*
- *Warranty of the system for 5 year faultless operation.*
- *After sales services including initial culture of the plant;*

SYSTEM DESCRIPTION

Sl. No.	**Parameter**	**SSE biogas plant**
1	Material of construction	Fiber
2	Space required	Very less
3	Gas pressure	Constant
4	Effect of temperature	Very less
5	Maintenance	None
6	Amount of feed	Very less
7	Investment	Less
8	Payback period	2 years
9	Installation	Very easy
10	Portability	Yes

FINANCIAL TERMS

100 % Advance against Invoice.

All taxes as per current applicable rate and may change as per change in norm. (5% GST applicable)

Any change in scope may have commercial implications.

We hope our offer is in line with your requirements, for any further clarifications / details feel free to contact us. Thanking you & assuring you our best services all the times.

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.

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.