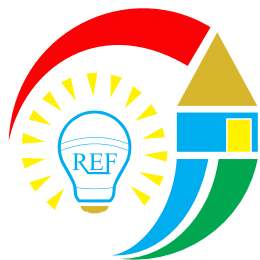


## RURAL ELECTRIFICATION FUND



Going  
**GREEN**  
With

**BIOGAS ENERGY**

*Magetsi Kumusha / Amagetsi Ekhaya*



*Magetsi Kumusha / Amagetsi Ekhaya*

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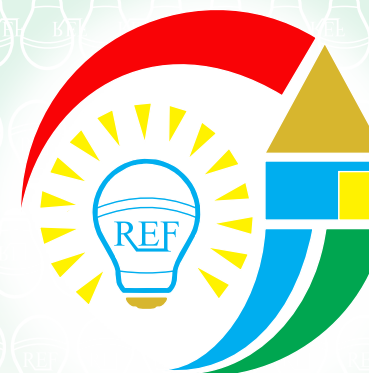
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## RURAL ELECTRIFICATION FUND



*Magetsi Kumusha / Amagetsi Ekhaya*

## BIOGAS ENERGY



## General Information

Biogas is a combustible gas produced during the decomposition of organic material by bacteria in anaerobic (absence of air) conditions. Biogas is typically composed of 60% methane and 40% of carbon-dioxide (CO<sub>2</sub>) and some traces of (SO<sub>2</sub>) sulphur dioxide and moisture. It is easily combustible and odorless. It is clean and renewable energy that can be used for cooking, lighting and in large quantities for electricity generation.

### Raw materials for biogas production

- Animal dung
- Poultry droppings
- Pig Waste
- Plant waste (husk, grass, weeds, hyacinth etc)
- Sewage (human waste)
- Industrial organic waste (from food and processing industry)
- Industrial organic wastes (vegetables peels, wastes food materials)



## Uses of Biogas

- Cooking and heating through use of stoves and burners.
- Lighting using biogas lamps with mantles
- Generation of electricity (running a generator which produces electricity).
- Production of rich organic fertilizer.



### Benefits of Biogas Technology

#### Energy benefits

- Use of biogas for cooking and heating results in saving of electricity which can be channelled into the productive sector of the economy.
- Biogas technology can be used in remote areas without access to electricity.
- Biogas burns rapidly, is relatively safe for use in households and has a convenient ignition temperature.

## Environmental and social benefits

- Reduction in deforestation when biogas is used as an alternative to firewood.
- Reduction in the use of fossil fuels which results in less carbon dioxide emissions and reduction of global warming.
- Biogas burns without smoke, soot, and odour and results in clean kitchen environment and reduction in smoke induced respiratory diseases.
- Waste management.



#### Economic benefits

- Cheaper source of cooking energy as compared to electricity, paraffin and LPG .
- Digested slurry can be used as a nutrient rich organic fertilizer.
- Employment creation through building and maintenance of biogas digesters.