



BIOGAS PLANTS

IES LAS FUENTES-
ERASMUS PROJECT

INDEX

- What is it?
- How is it obtained?
- Biogas plants
 - What feeds the biogas plant?
 - Functioning
- What do we use it for?



WHAT IS IT?

It is a renewable energy composed mainly by:

- **Methane**
- **Carbon dioxide**

Those come from the transformation of organic waste into energy in the form of gas through an oxygen-free process of organic waste.





HOW IS IT OBTAINED?

By decomposing organic matter:

- **In order to take advantage of the resulting gases, it is necessary to have a plant in which both the waste can be stored and the bacteria can do their job.**



BIOGAS PLANT

1. What feeds the biogas plant?



Organic substances



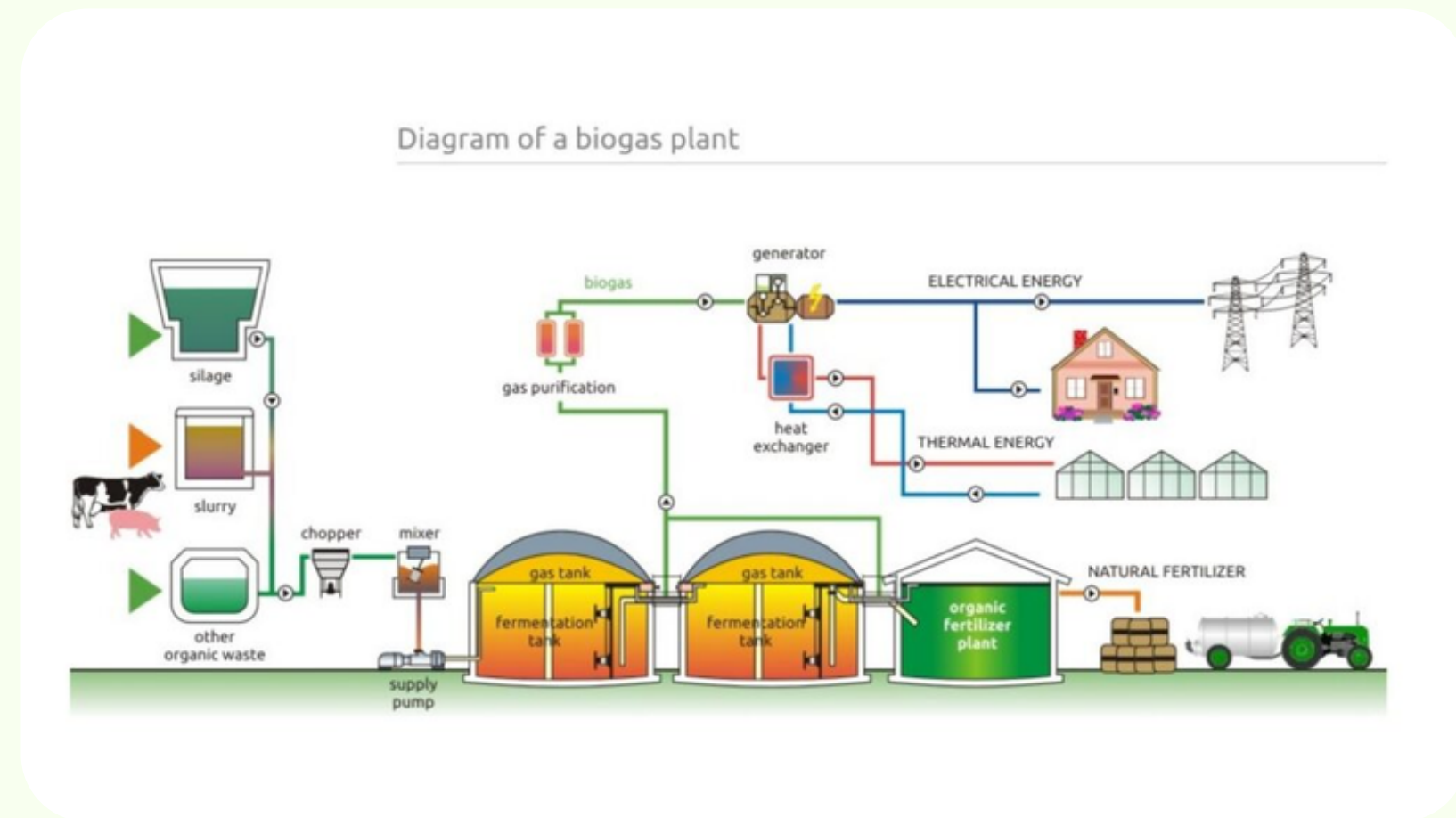
Renewable resources



**Semi-liquid fertilizers
and manure**

2. Functioning

1. The organic matter, mixed with water, is introduced into a digestion chamber.
2. This chamber is located below the ground level, after an excavation.
3. Due to the absence of oxygen, matter will decompose, generating mainly methane and carbon dióxido.
4. A valve located outside allows the biogas to pass through a network of pipes.
5. The pipeline is diverted to storage systems or to generators and motors, which convert the biogas into electricity or heat.
6. The remaining matter is expelled from the plant to serve as organic fertilizer in the agricultural industry.





FOR WHAT DO WE USE IT?

Mainly for obtaining:

- **Electrical energy**
- **Thermal energy**

If reformed (biomethane) it could be used for:

- **Biofuel in prepared vehicles**
- **Individual biodigesters: for farmers to transform their own waste and self-supply into energy**



THANKS FOR YOUR ATTENTION :)

