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ADOPTION OF AGRO-INDUSTRIAL TECHNOLOGIES (SUCH AS GASIFICATION OR ANAEROBIC DIGESTION)

CORRESPONDING MODULE 6

Introduction

Biomass comes in solid, liquid or gaseous form and can be used to generate electricity, directly for heating or as a transport fuel.
Biogas type of installation achieves a reduction in greenhouse gas emissions of approximately 50% of the gases that would be emitted without this treatment process.

Consideration should be given to:

- Proximity to a populated area (odour emission).
- Access routes for trucks and tractors
- Distance to waste producing areas (raw material)
- Distance to receiving areas of generated products (fertilisers)
- Impact on the landscape
- Water supply point

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Description

It is a company called AgroValorizaciones. This company produces biogas and biomethane from the anaerobic digestion of agricultural and livestock waste.

In addition to this, liquid digestate is also produced which is used as fertiliser in agriculture and solid digestate which is used as compost.

AGRBIOGÁS

The energy used in the plant is organic biogas of renewable origin and solar energy obtained through a photovoltaic installation to support the generation of biogas.

The installations have a surface area of 4 hectares and Biomethane production is 100 GWh/year.

This type of project aims to respond to one of the main challenges of our time, such as demographics, by fixing the population in rural areas, due to their capacity to generate employment in these environments.

Development, construction and operation of more than 25 projects for the valorisation of agricultural and livestock waste, with production of natural gas from renewable sources in the Iberian Peninsula over the next 5 years.

The company in a few key figures:

- Non-hazardous waste treated: 70,000 tonnes/year.
- Biomethane produced: 100 GWh/year.
- Emissions avoided: 4,000 tCO2eq/year.
- Budget: 17 million €.
- Direct jobs: 6.
- Indirect jobs: 25.

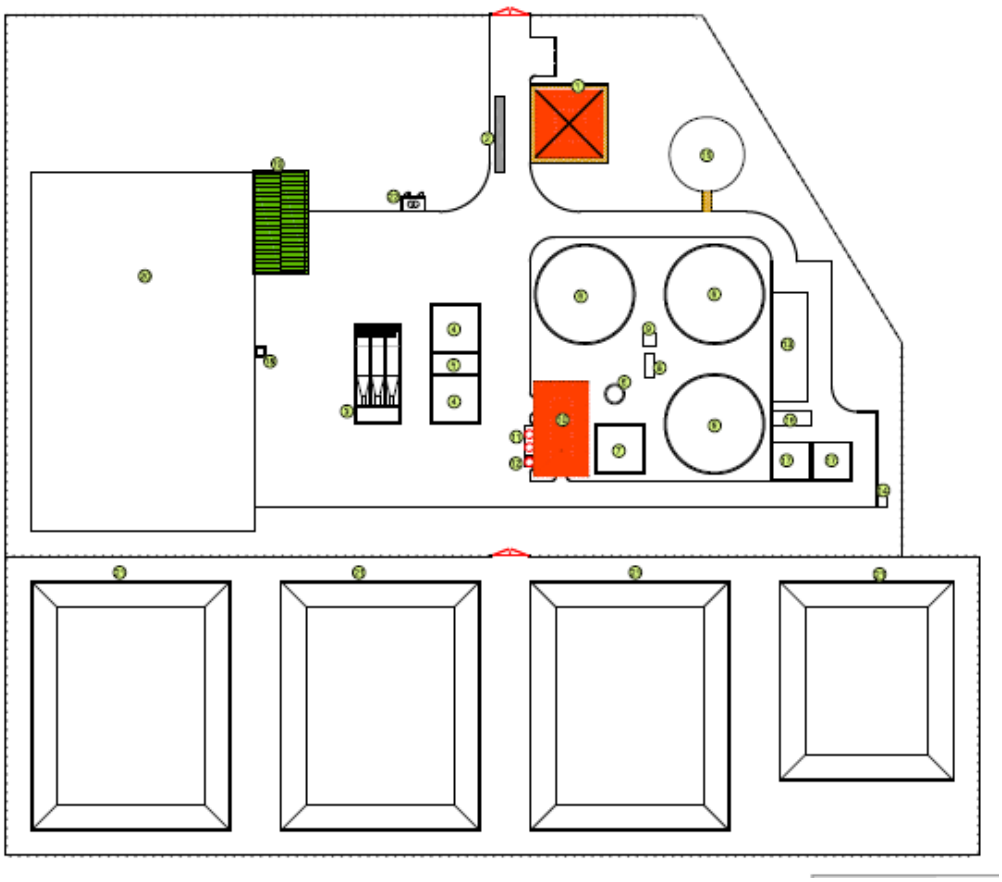

Image 1: General view of the facilities
Source: Provided by the company

Image 2: Energy sources used on the farm
Source: Provided by the company

Advantages and challenges

This project is based on circular economy. ORGANIC waste (agricultural and livestock) is removed from the environment and given value by producing natural gas from renewable sources and organic fertiliser and compost.

Advantages and disadvantages biogas and biomethane production:

- Advantages:
  - Reducción de las emisiones de metano del manejo tradicional de los residuos ganaderos (balsas de purines abiertas y aplicación del purín sin tratar al campo).
  - Sustitución de combustibles fósiles por combustibles de la misma calidad de origen orgánico y emisiones de CO_2 neutras.
  - Economic savings.
  - Removable source energy.
  - Reduction of CO_2 emissions.
  - Low maintenance of the installation.
- Disadvantages:
  - Greenhouse gas emissions in the production of biogas/biomethane, but in much smaller quantities than if the waste were deposited in tailings ponds.
  - High initial investment.

Main data

- - Postal address:
  GR-6103 A-92 – Charches, km 4,00.
  C.P.: 18512, La Calahorra (Granada).

  - Email: contacto@agrbiogas.com
  - Website: www.agrbiogas.es

Further Information

- https://www.juntadeandalucia.es/boja/2021/83/31
- https://www.juntadeandalucia.es/boja/2022/95/50