

GOOD PRACTICES AND TECHNOLOGIES

Reducing Footprint in Water

El Agua Nos Une – SuizAgua América Latina



Generation of energy through biogas in pig farms

SDG: 6.3 Improvement in water quality
7.2 Renewable energy



Company / implementer

Grupo Aliar Porcícola

Sector: ISIC 0144 Pig farming
ISIC 3821 Treatment and disposal
of non-hazardous waste

Location: Hacienda Machijure- Puerto Gaitán, Meta.
N 04° 09' 57", W 72° 08' 08".

Update: 02 Feb. 2018



Results

- Generation of **800 Kw/h** at the Machijure farm. The project is expected to be replicated at other farms to meet all of the company's energy needs..



Other benefits

- Reduction in the cost of electricity after using the biogas produced.
- Reduction of total emissions by **16,914 Ton eqCO₂/year (78%)**, compared to a non-biogas system.
- Increase in the quality and comfort of the pigs at the farms with air conditioning using electric power.
- Savings in maintenance costs for equipment, thanks to the reduction of failures due to voltage variations. .



Supplier References

Supplier: Gecolsa, tool and machinery.

Contact information: <https://gecolsa.com/>



Implementing Company

Company in charge of implementing

the solution: Grupo Aliar Porcícola

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Description

Due to significant difficulties in the supply of power in the region, and the size of the equipment at the Machijure facilities, **AGROPECUARIA ALIAR S.A.** will provide biogas generated by the digestion of pig manure to use it as fuel to meet the farm's operating needs and become a self-sufficient company.



Investment and Operating Costs

Costs: 667,743USD For the purchase and installation of biogas energy generation equipment.

Non-monetary costs:

- Motor maintenance: **€ 0.017/Kwh** for each Kwh produced.
- Operation and maintenance of the plant: **5%** of the total expenses per year.
- Insurance and overhead: **3%** of the total expenses per year.
- Maintenance of other equipment: **14%** of the total expenses per year.

Life span: approximately 15 years



Recommendations and limitations

- Approximate annual operation, **7,884 hours**.
It is important to note that the project will be carried out in phases, beginning with Phase I at the Machijure farm.



Cases of Application

Other group farms to reach the **3000Kw/h** needed to become self-sufficient.



References:

Good practices and technology sheet:

- Treatment of pig farming effluents by means of biogas for self-use.



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