



# Agri Seudre Énergies Le Chay, France

Client: Agri Seudre Énergies  
2021

New construction of an anaerobic biomethane plant



The newly built Agri Seudre Énergies biogas plant



### Initial situation

The construction of the Agri Seudre Énergies biogas plant was initiated by a group of farmers in 2011.

Since 2021, the plant has been processing organic waste into biomethane and fertilizer. The biomass consists mainly of animal manure produced by various farms as well as the nearby zoo. The project is a pioneer in sustainability: The plant is 60% powered by electricity from the in-house photovoltaic system. The water demand is covered with collected rainwater; the heat demand with waste heat from the fermentation process.

Recycled organic waste per year

**17 000 t**

Energy produced annually

**12 000 MWh**

Households supplied with biogas

**>1 000**

### Special challenges

During fermentation, organic waste such as manure or animal dung transforms into a viscous, acidic mass. This corrosive mixture attacks the surfaces of the valves and easily leads to blockages. The materials and design of the valves must therefore be particularly robust and corrosion-resistant.

Ring installation for the distribution of the liquid digestate



### Approach

**The biogas plant is designed so that all media can be transported between the four tanks via a single central pumping system.**

The built-in knife gate valves therefore play a central role in controlling these media flows. If a valve fails, this can affect the entire system. In addition, the valves must be suitable for liquid, solid, and gaseous media. A single Wey knife gate valve type in various designs made this possible. The test phase lasted almost three months, during which the fully assembled plant was first tested for leaks with air and then successfully tested with biomass. Only a short time later, the first biogas could be fed into the grid.

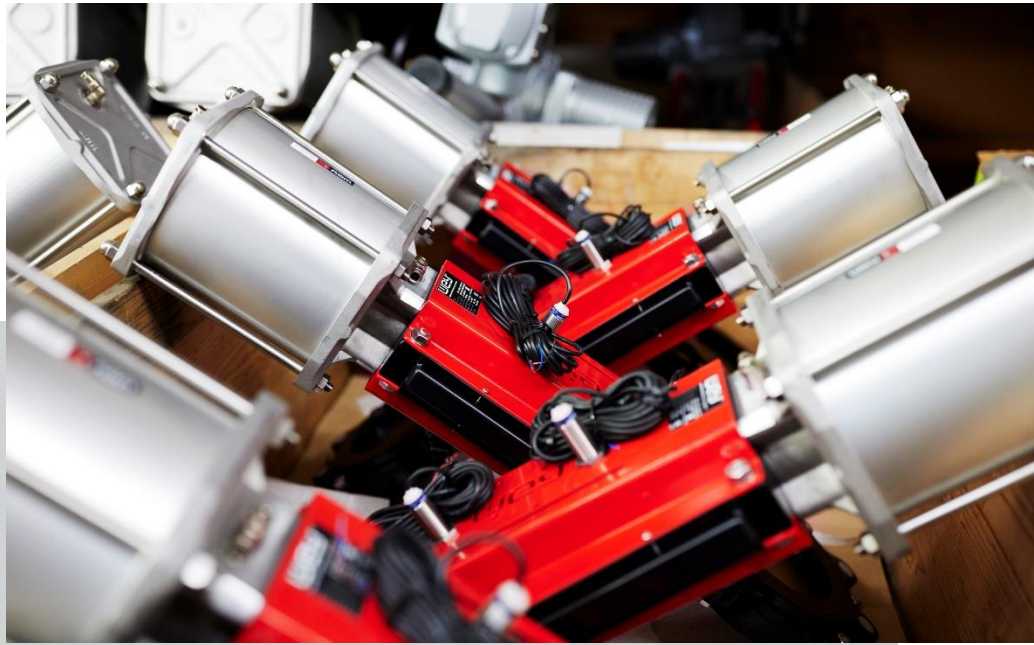
The construction of the plant was carried out by Naskeo Environnement, a sister company of Wey's French distributor SYCOMORE.

Ter'Green is another SYCOMORE sister involved in the project. Together with the other eleven owners, it operates the plant and advises the agricultural partners on development, operation, and maintenance.





Pneumatically operated knife gate valves  
VNC before delivery



Category

# Knife gate valves

Product series

## VN

Nominal sizes

## 80 – 300

Actuator

## Manual, pneumatic

Body material

## Cast iron, stainless steel

Maximum pressure

## 10 bar

Sealing type

## EPDM

Number of valves

## 50

**Limit switches and solenoid valves**  
on the pneumatically operated knife gate valves for central control from a distance

«The Wey knife gate valves are robust and efficient. So far, there hasn't been a single glitch.»

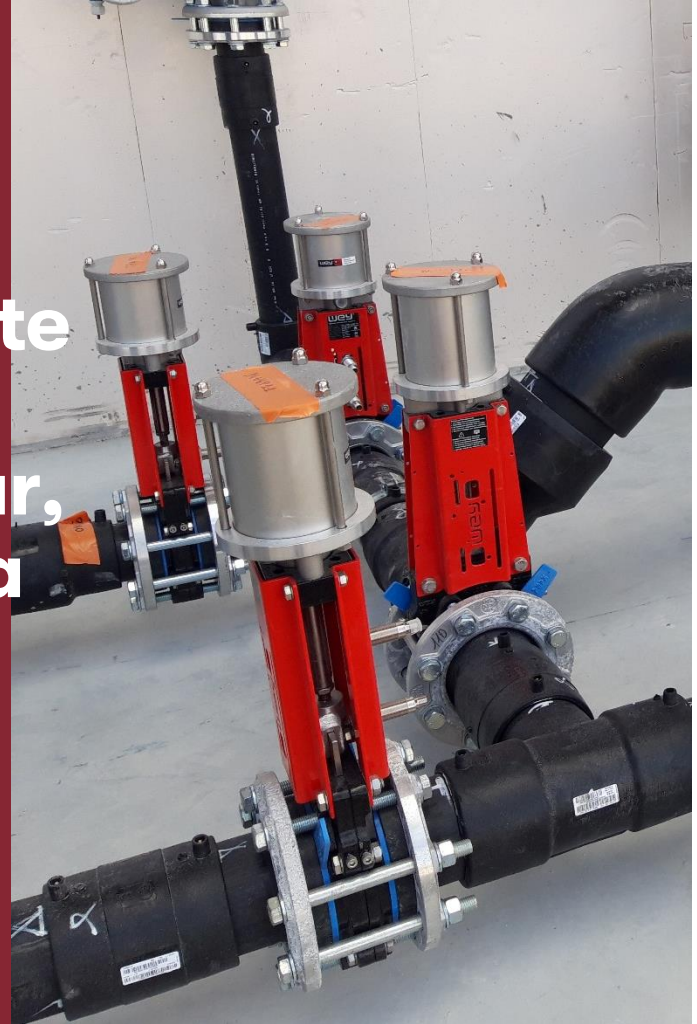
**Côme de Villelume**  
Chairman of SAS Agri Seudre Énergies

**Commissioning**  
**2021**

**Expected service life**  
**10 – 15 years**

**Expansion possibilities**  
The biomethane plant Agri Seudre Énergies is designed to be expanded as needed. For example, CO<sub>2</sub> could be captured and resold with an additional plant complex.

Although every biogas plant is designed individually, Agri Seudre Énergies can serve as a showcase for future projects. The repeated cooperation between Sistag and Naskeo Environnement means that we can draw on a wealth of experience in the biogas sector and are constantly expanding our expertise.



Pneumatically operated knife gate valves VN for flow control

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discuss your  
individual  
application.  
We show  
solutions that  
work.**

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