



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.

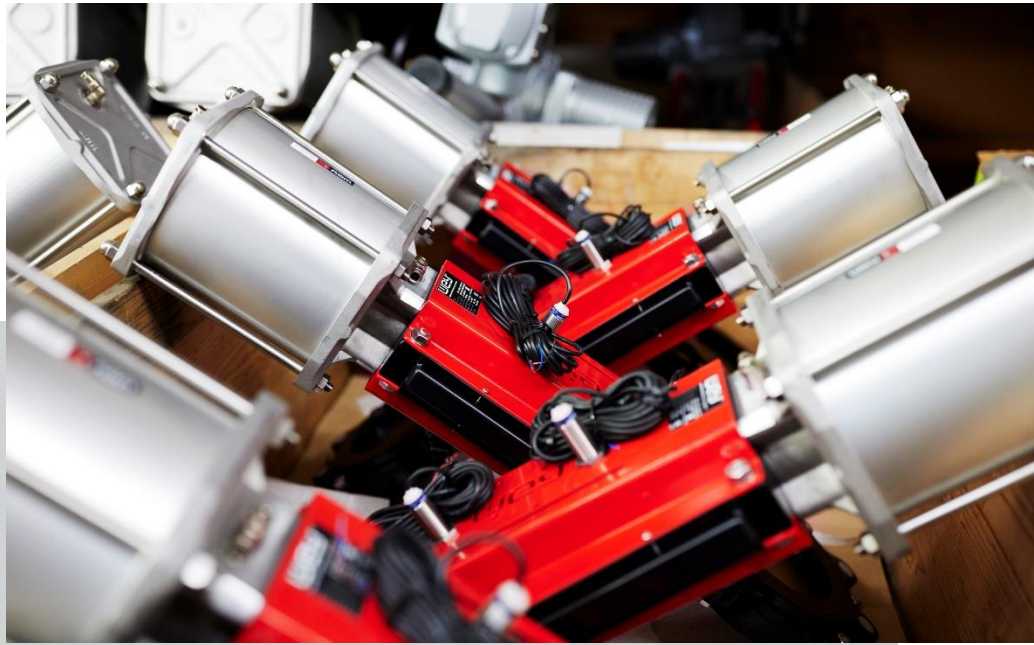
The built-in knife gate valves therefore play a central role in controlling these media flows. If a valve fails, this can affect the entire system. In addition, the valves must be suitable for liquid, solid, and gaseous media. A single Wey knife gate valve type in various designs made this possible. 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

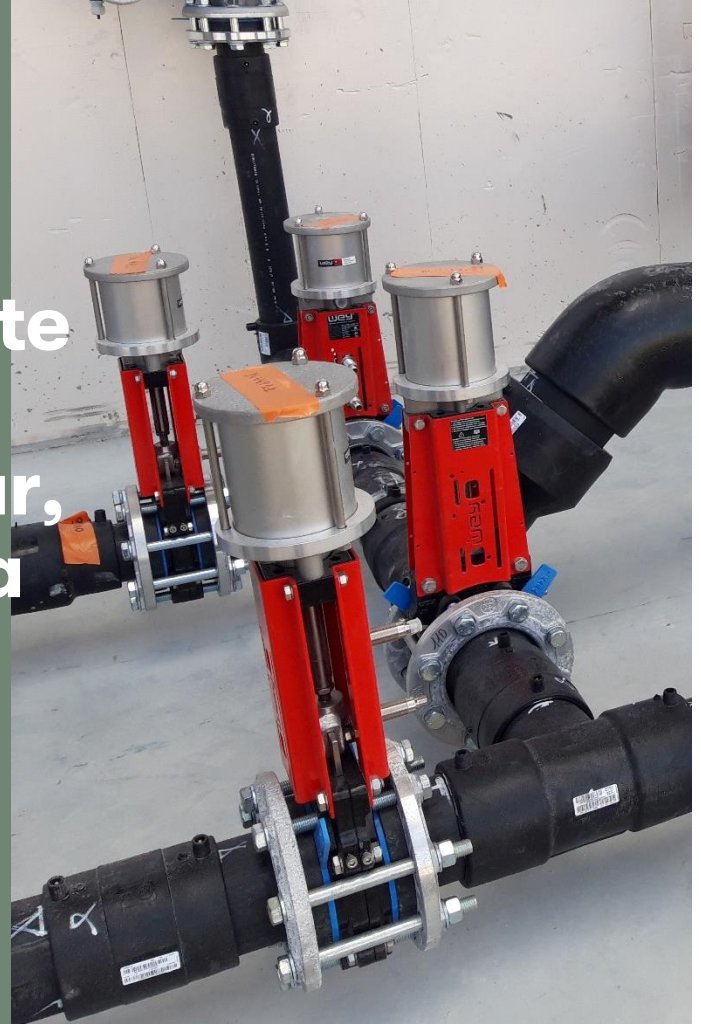
Commissioning
2021

Expected service life
10 – 15 years

Expansion possibilities

The biomethane plant Agri Seudre Énergies is designed to be expanded as needed. For example, CO₂ 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

**Contact us to
discuss your
individual
application.**
**We show
solutions that
work.**

Headquarters

Sistag AG
Eschenbach (Switzerland)
Tel. +41 41 449 99 44
info@sistag.ch

Subsidiaries

Sistag GmbH
Muggensturm (Germany)
Tel. +49 7222 7879 790
info@sistag.de

Wey Valve Inc.
Shannon (USA)
Tel. +1 662 963 2020
information@weyvalve.com

Wey sales partner in France

SYCOMORE
Bouguenais (France)
Tel. +33 285 67 0040
contact@sycomore-services.com