

The first European demonstrator of smart grids for gas

Pontivy Communauté

> Mauges Communauté

In western France
(Brittany and Pays
de la Loire), West Grid
Synergy aims to design
and experiment smart grid
solutions to maximize
biomethane injection into
the transmission and
distribution systems.

Pays de Pouzauges

Project partners are committed to the energy transition with Pontivy, Les Mauges, and Pouzauges territories















What is biomethane?

A **renewable** gas produced **locally** out of agricultural, industrial and household waste. The biomethane has similar technical properties as natural gas used in the industrial, residential and tertiary sectors.

Why West Grid Synergy?

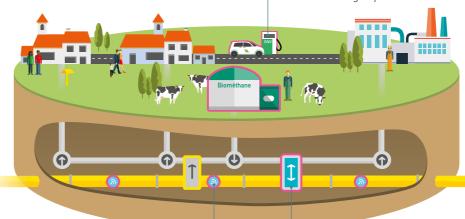
Greenhouse gas reduction, local waste-to-energy production, energy self-sufficiency, additional income... Renewable gas is a strong lever for the energy transition.

However, the rise in biomethane injections does have an impact on the gas grid. Indeed, the increasing number of injection unit projects can locally overtake injection capacity in the distribution system, in particular during summer when local gas consumption decreases significantly.

To allow more consumers to benefit from the increase in renewable and local gas production, the transmission and distribution systems need to be adapted thanks to innovative and digital solutions.

Smart grids for gas: how does it work?

New consumption uses, as NGV mobility, allow to support local and renewable gas production.

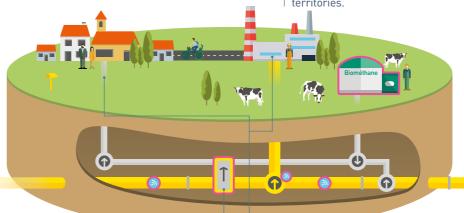


Wireless communicating sensors

at different points of the grids send pressure data that states for the local balance between consumption and production.

Biomethane exportation

(through reverse flow gas units) from the distribution to the transmission system enables an increase in local storage capacity and allows to deliver renewable gas to neighboring territories.



Smart delivery gas units can adapt the volume of gas delivered to the distribution system so that biomethane production is appropriately completed by natural gas. The objective is to always give priority to biomethane production.

Network meshing

allows more consumers to benefit from local and renewable gas.

Coordinated gas network infrastructures that can interact allow optimizing the overall performance of gas systems.

Solutions experimented as part of the West Grid Synergy demonstrator to turn grids into smart grids.



Premier démonstrateur européen de réseaux intelligents pour le gaz

Gas grid operators allow consumers to benefit from renewable and local energy by making biomethane injection into the grid a reality.

1 1 biomethane injection units into

the gas networks by 2022

to 120%
the different territories' gas self-sufficiency by 2022

9 564 Fresidential and tertiary consumers & 32

will benefit from local and renewable gas by 2022

Up to 225 GWh/year feed the grid by 2022

feed the grid by 2022, corresponding to up to 19 000 households' heating consumption

Key figures of the West Grid Synergy territories.



West Grid Synergy is labeled by SMILE, an organization that aims to accompany and support the deployment of important regional industrial projects connected to smart grids in western France (Brittany and Pays de la Loire).

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