Green Gas production from the Reyran WWTP.

by Erick MASCARO / 2019-06-13 14:53:09 / France / 8091 / FR

Year of commitment : 2019
CO2 Impact : -Reduction of the road traffic because of the reduction of the volume of the sludge to be evacuated and reduction of 1500 T eq CO2 thanks to the process of anaerobic digestion

Green energies : Biogas
Digital services : Waste
Sustainable mobility : Other
Water cycle : Used water recycling
Circular economy and waste management : Methanation unit
Biodiversity & Ecosystems : / Carbon capture /

7 300 000 €

Builder
OTV - VEOLIA

Manager / Dealer
VEOLIA

GENERAL INFORMATION

Construction of a green gas production unit, based on sludge recovery at the Reyran Wastewater Treatment Plant.

This production perfectly illustrates the desire of the Var Esterel Mediterranean agglomeration to be part of a real and sustainable circular economy approach or "waste" become a renewable energy at the service of the development of the ecological transition of a territory.

Progress Status

Delivered

Data Reliability

Self-declared

Funding Type

Public

Website Enterprise / Infrastructure

Maitre d'Ouvrage : Communauté d'Agglomération Var Esterel Méditerranée
Exploitant de l'unité de production : VEOLIA

Sustainable Development

Attractiveness :

Allowing the creation of renewable energy from the sludge of the largest wastewater treatment plant in the Agglomeration. The solution makes it possible to:

- reduce sludge volumes and therefore transport costs and environmental impact,
- recover the fatal energy of the sludge to favor the production of green gas and thus improve the economic balance of the process,
- offer a digestate used in the composting industry which considerably limits the use of chemical fertilizers.

Well Being :

Improve the quality of the air.

This unit offers a solution in the energy recovery of bio waste.

Social Cohesion :

A unifying project for several actors in the first place the Community of Agglomeration and all the elected officials, who brought the project to their respective territory, the delegate who mobilized technical expertise and the distributor of natural gas that prompted the reflection and made aware of the process and its interest for the territory of the Agglomeration Community.

This local production of green gas for about 8 Gwh per year allows the inhabitants of the agglomeration to consume renewable gas for both conventional uses, but it has also brought to light a project to build a gas station refueling of Natural Gas for vehicles as well as BioGNV.

Preservation / Environmental Improvement :

Reduction of 1500 T eq CO2 thanks to the anaerobic digestion process and the reduction of the number of vehicles for transporting sludge.

Reduction of 2200 tons of sludge, ie 30% of the volume treated by the wastewater treatment plant, which limits road traffic and therefore the associated pollution.

Resilience :

The project is virtuous and has a rather good citizen acceptability of producing energy from "waste". The elected representatives understood this issue well because it was in line with the President's political priorities namely the ecological transition and the development of the circular economy.

Responsible use of resources :

In this case, the resource is considered waste and its recovery has been optimized because in addition to producing green gas with sludge, they have also provided calories to heat the digester.

Testimony / Feedback

Expression of the President of the Community of Agglomeration Var Esterel Mediterranean, Mr. Roland BERTORA:

Since March 18, the new equipment of the Reyran wastewater treatment plant in Fréjus has reduced sludge by 30% and produced biogas, which is injected into the GRDF network. A first in the Provence-Alpes-Côte d'Azur region and the fourth installation of this importance in France, according to Roland Bertora , president of the Var Estérel Mediterranean agglomeration (Cavem), and Philippe Chaniol, director of Territère Estérel de Veolia, public service delegate of the station.

Through a device called digester and an innovative process that is being developed throughout France, it is, in summary, thanks to this methanization unit to recover and digest sludge without burning fossil energy so to produce biogas. 30% of the consumption of the Fréjus / Saint-Raphaël sector will be provided in summer; 700 homes can be powered in winter.

The new equipment cost 7.3 million euros, of which 45% participation of the Rhône-Mediterranean Water Agency. It received aid from the Region (€ 700,000), the Environment Agency and energy management (€ 650,000), while the balance took the form of a concessional endorsement from the Cavem to the delegatee Veolia, with regard to its investment. Depreciation is expected by 2025.

Governance

Community of Agglomeration Var Esterel Mediterranean

Holder Type : Regional Authority

OTV - VEOLIA

Builder Type : Other

VEOLIA

Manager / Dealer Type : Private

The Var Esterel Mediterranean Agglomeration Community as Project Manager has piloted the project with several stakeholders, partners and financiers:

- VEOLIA and OTV
- GrDF
- ADEME PACA
- Water Agency
- Regional Council South Provence Alpes Côte d'Azur

Committees of all or part of the parties were organized throughout the decision-making process. These proceedings were held until the commissioning of the green gas production unit on March 18, 2019.

Today, meetings are being held to verify the correct match between the projected volumes of green gas that had to be produced and injected into the natural gas network and the volumes actually injected.

Business Model :

The equipment cost 7.3 million euros, of which 45% public funding (Rhone Mediterranean Water Agency, Region, ADEME), the balance has taken the form of a concessional endorsement from CAVEM to the delegate VEOLIA, with regard to its investment. Depreciation is expected by 2025.

The resourcefulness of the process, but also the legal and financial setup, allows CAVEM to consider 750,000 euros in revenues from the sale of gas by 2020, as well as 360,000 euros in savings on sludge disposal (now reduced) by trips (as far as Vaucluse) that will not be done anymore. The sludge in question is the main waste emitted by the stations. " *We protect the environment, we make money and we stop doing the shadoks,* " says Roland Bertora, whose energy transition is one of the three major components of its sustainable development strategy, with the ecological transition and generational.

Sustainable Solutions

Green Gas Production Unit - BioReyran

Description :

The sludge from the treatment plant is put in a digester, deprived of air and heated to 37 ° C, the bacteria degrade the organic matter thus producing a biogas. The last one is recovered and purified to obtain the same chemical characteristics as natural gas, it is then sent to the gas distribution network operated by GRDF through an injection station where it is constantly monitored and where it is accounted for to be billed to a gas supplier.

This methanation process makes it possible to recover and digest sludge without burning fossil energy. The production of renewable gas is 30% of the consumption of the Fréjus / Saint-Raphaël sector in summer and 4000 homes will be fed in winter, 20% of the gas distributed, knowing that eventually 100% will have to follow this virtuous path. The stake is of prime importance in the territory of CAVEM, which until now produced only 2% of its energy from renewable energy.

CO2 Impact : 1 500,00

- Mobility :
- Economic development :
- Energy/climate :
- Air quality
- Circular economy
- Waste management

Company (es) Website :

VEOLIA

0 -

Company (es) Website :

GRDF

0 -

Company (es) Website :

ADEME PACA

0 -

Contest

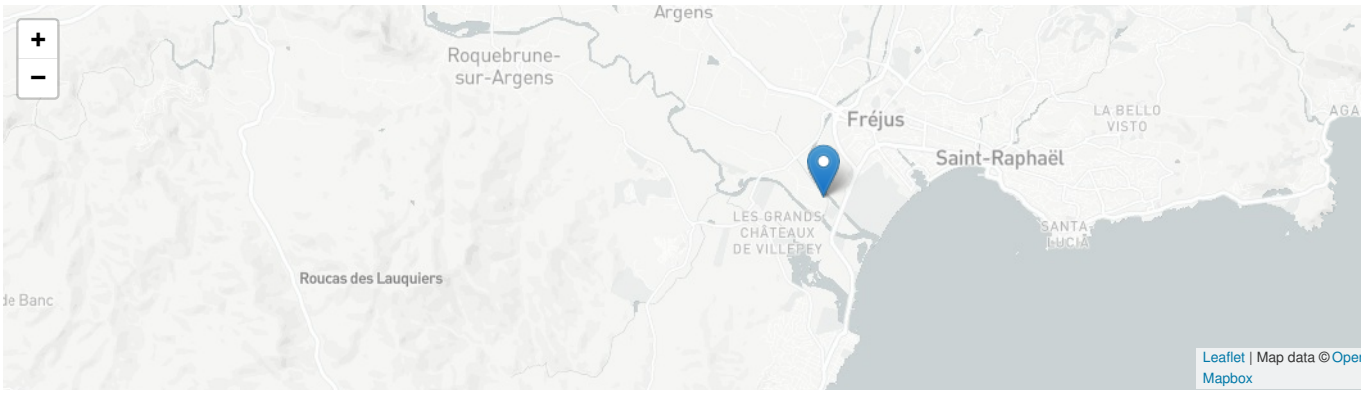
Reasons for participating in the competition(s)

Une production de gaz vert optimisée grâce à la récupération des calories des eaux usées et leur utilisation pour le chauffage du digesteur.

Building candidate in the category

Grand Prix Infrastructure Durable

Prix du public



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