

# Syndicate Meulan Hardricourt Les Mureaux (SIAMLHM): anaerobic digestion (AD) to treat sewage sludge and fat

## Development Plan (Les Mureaux, France)

**Overview: CHP SIAMLHM is a bioenergy project developed in France by the Syndicate of Meulan Hardricourt Les Mureaux, called SIAMHLM. The objective of this project is to treat and enhance the deposit of sludge and grease from the water treatment plant by anaerobic digestion and provide energy needs locally.**

### The opportunity

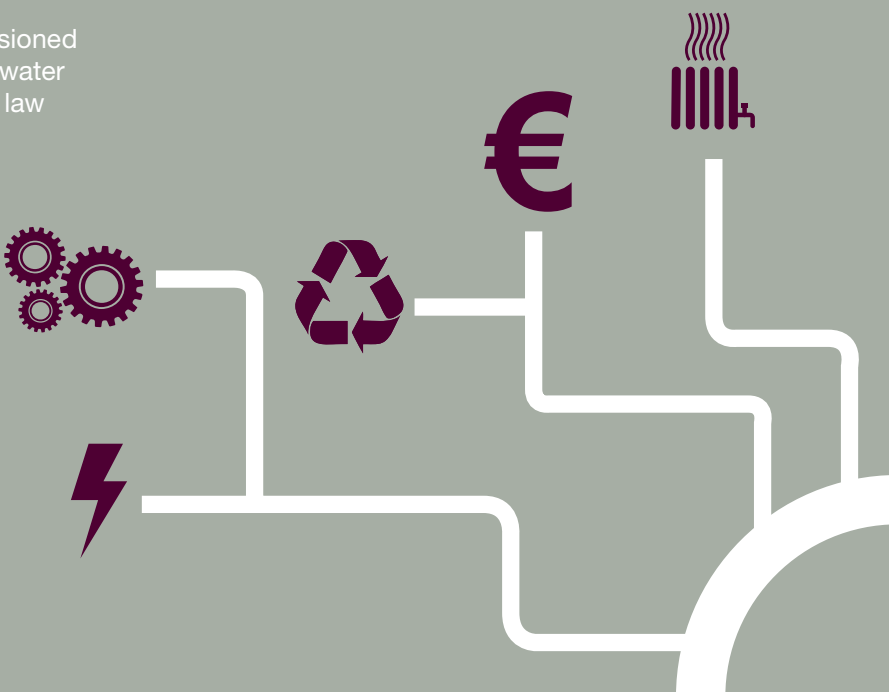
The National plan of water treatment of January 2011 concluded that, in order to be compliant, the SIAMHLM is under an obligation to initiate a series of works on its network of sanitation and its pumping stations.

Taking into account that the work that will be conducted on the networks and the difficulties encountered today in the management of sewage sludge, difficulties related to the constraints of storage of sludge valued in agriculture and the possible sludge spreading, SIAMHLM commissioned an audit and study of the evolution of its wastewater treatment plant in order to respect the existing law and possible forthcoming law on sludge. The deposit of sludge and grease from sewage treatment represents an average of 6.7 tonnes per day. The sewage has to be dried before entering the anaerobic digestion and then stored.

This solution would also include organic waste from restaurants amounting to approximately 0.5 tonnes per day.

### Solution

The study conducted through BioenNW showed that some food industries could provide an efficient solution that could benefit all the SIAMHLM facilities in accordance with the law. This solution would be economically profitable and environmentally better than the existing solution which could be banned. This solution would provide heat, gas, electricity and much improved and legal fertilizer for the soil.



## Business model

For a total budget of around €15 million (for the AD, drying and storage of the sewage), the SIAMHLM initiative could be operational by 2019. All the outputs from the AD would be used on site by the combined heat and power (CHP) engine. The heat and electricity would be used for the water treatment plant and part of the electricity would be sold to French electricity company, EDF.

## Social and environmental impact

The biogas offers the potential for renewable energy. Around 79% of this biogas will be collected to produce heat and electricity. No new jobs would be created but it would secure the jobs already in place within the SIAMHLM. It would also stabilise future water prices.

## Market and competition:

The SIAMHLM CHP project is a co-creation project involving several partners, from the water treatment plant to the local authority where the unit will be located. It is a high potential project with the capacity to provide multi-benefits adapted to the different partners of the project. It would also give Les Mureaux a real advantage in terms of sustainability and profitability.

This development plan has been produced through BioenNW – a €7.9m strategic initiative of the European Union INTERREG IVB North West Europe Programme (2011-2015). BioenNW is led by the European Bioenergy Research Institute at Aston University, UK and sees 11 partners working together to deliver small-scale bioenergy schemes throughout North West Europe.



Report issued in November 2014

**For further information contact the Bioenergy Support Network:**

Email: [bioenergy@aston.ac.uk](mailto:bioenergy@aston.ac.uk)  
Web: [www.bioenergy-nw.eu](http://www.bioenergy-nw.eu)  
Tel: +44 (0) 121 204 5318

