

IN PLESSIS-GASSOT GARBAGE PROVIDES FIRST-EVER SOURCE OF METHANE ENERGY IN FRANCE



The commune of Plessis-Gassot has just opened a power plant that will furnish the amount of energy equivalent to the consumption of 41,200 households, thanks to methane produced by the fermentation of non-recyclable waste. This is a first for France and a shining example of an original initiative.

Power generated from garbage

Situated next to the garbage dump in the commune of Plessis-Gassot, a power plant that produces biogas made from garbage was inaugurated in June, 2014.

It's name? Electr'od. The process is simple: it consists of leaving non-recyclable waste to ferment in the absence of oxygen, in order to extract methane from it. The methane, which is part of the composition of biogas, is then transformed into electricity thanks to a process of methanation.

Enormous electric capacity

The Electr'od power plant will be the largest power plant of its kind in France. It will have a production capacity of 130,000 MW per year. For a point of comparison, this corresponds to the yearly electric production of 40 wind turbines. But it also represents the equivalent of the consumption of 41,200 households. Production that will be sold to the ERDF [Électricité Réseau Distribution France] before being injected into the national electricity network.

Heating a city with biogas

Electr'od works in cogeneration, and simultaneously produces 30,000 MW per year of thermic energy, which is approximately the equivalent of 2,850 households' energy consumption. This thermic energy feeds a new network of heating and sanitary hot water in the commune of Plessis-Gassot, fueling households and collective establishments (town hall, community centers, churches, and other communal buildings).



Plessis-Gassot: A tiny city

The heat produced by the power plant will feed the heating and hot water network of the commune. Veolia [the company behind Electr'od] emphasizes that, “This is the first time in France that a city is heated thanks to the development of biogas.” But the information must be put into perspective because the city of Plessis-Gassot only has 69 inhabitants. The heating bills for residents of Plessis-Gassot who are connected to the network fed by Electr'od will be 92% less than with electric heating and 91% less than with oil heating.

Setting an example for sustainability

In transforming non-recyclable waste from communities and economic activities into renewable energy (electricity and heat), used by these same citizens and enterprises, Electr'od illustrates the principle of the circular economy.

A reference to the procedure of methanation

Electr'od manages a performance and an efficiency that is unique in France. It can be installed on other installations that produce biogas: household waste anaerobic digesters, agricultural anaerobic digesters, and industrial and municipal water treatment plants. Electr'od uses ten GE Jenbacher gas motors, of a localized power of 17 MW (the most powerful biogas sector installation in France.) Electr'od treats 100 million m³ of biogas each year and has an investment budget of 16.5 million euros.

Source: <http://www.globalsiteplans.com/environmental-design/energy-environmental-design/in-plessis-gassot-garbage-provides-first-ever-source-of-methane-energy-in-france/>