





PRESS RELEASE

Electr'od:

a new facility that produces the most renewable energy from biogas in France, inaugurated in Plessis-Gassot (Paris region)

Plessis-Gassot, June 10, 2014_. By transforming non-recyclable municipal and business waste into renewable energy (electricity and heat), used by the producer citizens and businesses, Electr'od is a perfect illustration of the principle of the circular economy. Designed by Veolia in partnership with Dalkia and Clarke Energy, this facility was inaugurated today by Bernard Harambillet, Managing Director of Veolia Propreté France, François Habègre, CEO of Dalkia France, and Didier Lartigue, General Manager of Clarke Energy, in the presence of Didier Guevel, the Mayor of Plessis-Gassot.

1. The highest amount of electricity and thermal energy produced by a facility in France

Operating at the non-hazardous waste landfill in Plessis-Gassot (Greater Paris region), Electr'od captures the biogas produced by the non-recyclable waste¹ and converts it into electricity. Electr'od produces **130,000 MWh/year of electricity**, that is, the equivalent consumption of around **41,200 households** (*excluding heating*). It also corresponds to the electricity produced by **40 wind turbines** in a year.

The electricity is sold to the French grid operator ERDF and **used by households and businesses** in France.

2. A first in France: heat a town using recovered biogas

Electr'od operates as a cogeneration plant and simultaneously produces **30,000 MWh/year of thermal energy**, that is, the equivalent consumption of around **2,850 households**.

This thermal energy supplies a new **district heating and domestic hot water network** in the municipality of Plessis-Gassot serving **households and community premises** (town hall, community hall, church, and community center). It is the first time in France that a town has been heated using recovered biogas.

The **heating bill** of Plessis-Gassot residents connected to the network supplied by Electr'od **will be 92%** less than for electric heating and 91% less than for oil heating.

3. Electr'od is a new reference for a rapidly growing sector: anaerobic digestion

Electr'od can be installed at other facilities generating biogas, such as household waste anaerobic digesters², farm waste anaerobic digesters³, and industrial and municipal wastewater plants.

Anaerobic digestion is one aspect of the French government's policy for developing sources of renewable energy.

Electr'od: performance and efficiency unique in France

- **10** GE Jenbacher gas engines with a total installed electric power of **17 MW** (the most powerful biogas sector installation in France).
- **100 million cubic meters of biogas**⁴ treated per year (the most efficient plant in France).
- 16.5 million euro investment budget.

Equivalent of almost 300 times the Montparnasse Tower in Paris

¹ In the absence of oxygen in landfill storage cells, the organic fraction of waste ferments and produces biogas. This is the natural process of anaerobic digestion.

² France's Grenelle Environmental Forum has set a target of 45% recovery of organic matter by 2020.

³ The French Ministry of Agriculture encourages the development of anaerobic digesters through its EMAA (Methane Energy and Nitrogen Autonomy) program that expects 1,000 units will be installed by 2020.

Clarke Energy

Located near Marseille, southern France, Clarke Energy is the French subsidiary of the Clark Group. It provides numerous turnkey solutions based on GE Energy Jenbacher's high-performance products in the areas of cogeneration (natural gas), biogas (including treatment plant gas, syngas, blast furnace gas, etc.) and special gases. Clarke Energy is the leader in the area of decentralized production and the cogeneration of heat and electricity. To date, more than 442 GE Jenbacher gas engines have been installed in France representing an installed power of 756 MWe, of which 617 MWe (321 engines) for natural gas engines, and 139 MWe (121 engines) for biogas and special gas applications.

About Dalkia

A subsidiary of Veolia Environnement and Electricité de France (EDF), Dalkia, a global leader in energy services, provides innovative solutions to support the sustainable growth of cities and businesses. In an era of climate change, volatile energy prices and scarce resources, Dalkia offers customers its expertise in developing, constructing and operating greener and more economical energy solutions. With about 43,000 employees in 27 countries, Dalkia reported managed revenue of €8.4 billion in 2013. <u>www.dalkia.com</u>

Veolia is the global leader in optimized resource management. With over 200,000 employees* worldwide, the company designs and provides water, waste and energy management solutions that contribute to the sustainable development of communities and industries. Through its three complementary business activities, Veolia helps to develop access to resources, preserve available resources, and to replenish them. In 2013, Veolia supplied 94 million people with drinking water and 62 million people with wastewater service, produced 86 million megawatt hours of energy and converted 38 million metric tons of waste into new materials and energy. Veolia (Paris Euronext: VIE and NYSE: VE) recorded revenue of \in 22.3 billion* in 2013. <u>www.veolia.com</u>

(*) Excluding Transdev employees and revenue currently under divestment

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