



TEDOM CENTO 2x IN ONE CONTAINER for a municipal landfill near Pagny Sur Meuse, France

At the beginning of 2023, our French partner Valotech Energies commissioned an energy source unit with a total electrical output of 320 kW, housed in a single container.

The fuel in this case is landfill gas, which is produced naturally by the landfill due to the decomposition of its biological components. Unfortunately, this gas is very harmful to the environment due to its high methane content. However, this same methane content also makes it a good energy source. By combustion in a source system, approximately 2,650 MWh of electricity can be generated per year at the municipal landfill in this way. This electricity is fed back the grid and constitutes a significant source of income for the landfill operator.

However, due to the nature of gas generation in landfills, its composition can be variable. In the French landfill, in particular, the methane content is low, between 30–40%. In fact, the optimum concentration for combustion in a gas engine is at least 50%. However, at TEDOM, we have extensive experience in the use of landfill gas. In the course of our existence, we have delivered over 120 source units to landfills around the world, the first of which dates back to 1997. In addition, we ourselves own and operate a number of these plants in the Czech Republic.

We have therefore adapted the gas route for this lean mixture so that, even with low methane concentrations, the plant can be operated without difficulties. Thanks to this, the benefit and significance of this system is not only energy-related but also environmental, as it reduces methane leakage into the air.

Source System	2x TEDOM Cento 160 in one container
Fuel	Landfill gas
Electrical output	320 kW
Heat output	Without Heat Exchanger
Total efficiency (LHV)	35.8 %
Commissioning date	January 202
Place of Installation	Pagny Sur Meuse, France



Combined heat and power production, also known as cogeneration, is a method of electricity generation where the heat released in the process of generating electricity is used in an efficient way. During this process, a high efficiency of energy recovery from the fuel is achieved while this fuel is mostly natural gas, LPG or biogas. Cogeneration pays off where there are higher requirements for the supplies of heat or cold. The electricity generated in the CHP unit can be used for the facility's own consumption or it can be fed into the distribution network.