

BTW Glossary

BIOMETHANE AND BIOGAS

Biogas

Natural gaseous fuel. It is obtained by anaerobic-digestion, as a product of the fermentation of substances of organic origin, both animal and vegetable, by means of bacteria, inside special digesters.

Biomethane

Natural and renewable gas, obtained from the process of biogas improvement, a procedure known as upgrading.

Digestate

The liquid or solid material obtained at the end of the anaerobic digestion process.

Biofertilizers

Products that provide the soil and plants with the nutrients needed for their development, at the same time improving soil quality and helping to achieve a more optimal and natural microbiological environment.

Alpeorujo

The product obtained after the olives have been milled and then cold-pressed to obtain virgin olive oil.

SEWAGE

Anaerobic digestion or biomethanization

A biological process in which microorganisms break down biodegradable material in the absence of oxygen, producing various gases, among which carbon dioxide and methane are the most abundant. This process consists of maintaining anaerobic conditions in both primary and secondary activated sludge plants, and through a number of different phases (hydrolysis, acidogenesis, acetogenesis and methanogenesis) to reduce organic matter and obtain biogas consisting of approximately 70% methane (CH₄).

Aerobic stabilization

This consists of injecting oxygen (air) into a digester. The process works in endogenous respiration. There is a reduction of the volatile fraction and thus of the dry matter produced by the WWTP (wastewater treatment plant), to give compost.

Sludge composting

This is the use of sludge produced in sewage plants, after the required treatment, to improve soil structure and provide nutrients under aerobic conditions.

Primary

This is the first stage of the sewage treatment process, where undissolved elements such as sand, garbage, etc. are separated from the water by decantation.

Denitro

A biological process of removing nitrogen and its compounds using bacteria.

PLASMA

Plasma

Plasma is the fourth state of matter after solid, liquid and gas. It is an extremely hot, electron-charged gas. Examples of plasma are fluorescent tubes; the air when lightning strikes; or the gas in plasma televisions..

Carbon footprint

The total set of greenhouse gas (GHG) emissions caused by an organisation, event or product. This is expressed in terms of the number of tons of carbon dioxide emitted, or its equivalent for the emission of other GHGs.

Dioxins

They are a group of chemical compounds that are persistent organic pollutants (POPs).

Furans

A five-membered aromatic heterocyclic organic compound that includes an oxygen atom. It is a clear, colorless, highly flammable, highly volatile liquid with a boiling point near room temperature. It is toxic and may be carcinogenic.

Gasification

A process that converts materials containing carbon and hydrogen, such as coal, petroleum, plastics or biomass, primarily into carbon monoxide and hydrogen by causing the raw material to react with a controlled amount of air, oxygen and/or steam, at high temperatures.

Synthesis gas

The gas resulting from gasification. If produced through traditional gasification, in addition to carbon monoxide and hydrogen, synthesis contains more than 50% nitrogen. If produced from plasma, the nitrogen is less than 10%.

Toxic or hazardous waste

Materials or products that, once discarded, may release toxic substances into the environment. They present substantial or potential threats to public health or the environment.

Inert waste

Non-hazardous waste that does not undergo significant physical, chemical or biological transformation. It is not soluble or combustible,

nor does it react physically, chemically or in any other way.

Sanitary waste

All waste, regardless of its state, produced in health centers and veterinary clinics, including the waste from their current or former containers and packaging.

Municipal Solid Waste (MSW)

This is household waste and some commercial waste.

Plasma torch

A device used to produce the plasma arc generated by the radiating field. This also applies to welding or metal cutting.

Incinerator

A facility that uses the combustion of waste to generate steam which in turn produces electricity. At the end of the process, slag and fly ash remain.

Methanol

This is the simplest alcohol. It is the second most consumed raw material in the world. It is used as a solvent, as a precursor in the manufacture of monomers for plastics and is increasingly used as a fuel due to its high calorific value and low carbon footprint. It is also being developed as a means of storing and transporting hydrogen.

Hydrogen

The chemical element with atomic number 1, represented by the symbol H. With an atomic mass of 1.007971, it is the lightest element in the periodic table of the elements. It usually occurs in its molecular form, forming the diatomic gas H₂ under normal conditions. This gas is flammable, colorless, odorless, non-metallic and insoluble in water.