

real solutions for real needs

## Waste to Energy

**Waste-to-energy (WtE)** or **Energy-from-Waste (EfW)** is the process of generating energy in the form of electricity and/or heat from the management of waste.

Based in a gasification technology EAWC are able to produce energy from waste and other fuels without direct combustion. These technologies have the potential to produce more electric power from direct fuel combustion.

Gasification is a process that transforms any carbon-based material, such as MSW, into energy without burning it. Instead, gasification converts the materials into a clean "synthesis gas" (Syngas) by creating a chemical reaction. This reaction combines those carbon-based materials (known as feedstocks) with small amounts of air or oxygen, breaking them down into simple molecules, primarily a mixture of carbon monoxide and hydrogen, and removing pollutants and impurities.

The syngas produced with EAWC Waste Management Process can be converted into electricity and valuable products such as chemicals, fertilizers, substitute natural gas, hydrogen, consumer products, steam, etc.

All waste is safely and effectively destroyed by this process, no matter how hazardous, toxic or lethal they may be. It is not enough to destroy hazardous waste. We produce machines that process "materials previously regarded as wastes".

# Waste Solid and Liquid

#### EAWC-WtE-PCS

Used to eliminate the solid waste, the process employs a plasma thermal destruction system that operates in a closed loop producing almost no air emissions as a by-product of the process. Plasma is a highly energized gas that will generally exceed 30,000 degrees Fahrenheit during operation. The system turns those material feedstocks into safe, valuable products such as synthesis gas (Syngas).

#### EAWC-WtE-PAF

Used to eliminate the liquid waste, the process decomposes the liquid molecules into atoms and forms a plasma around the tips of the electrodes at about 10,000°F / 5,500 °C. The EAWC.WtE-PAF moves the plasma away from the electrodes and controls the formation of Syngas that rises to the surface for collection.

### What is Syngas?

Syngas is a fuel gas mixture consisting primarily of hydrogen, carbon monoxide, and very often some carbon dioxide. Syngas is usually a product of gasification and the main application is electricity generation. Production methods include gasification of coal, biomass, and in some types of waste-to-energy gasification facilities.

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