



Innovative Solutions to

The Human Waste Dilemma

Fluidized Bed Gasification

Fluidized Bed Gasification is a process that converts carbon-containing waste material into a synthetic fuel gas, along with a very small amount of inert char. Biosolids are fed into the gasifier and a controlled amount of oxygen is introduced. Once necessary temperatures are achieved, a thermo-chemical process converts the biomass into a combustible syngas primarily composed of carbon monoxide, hydrogen, and methane. This sustainable fuel can be used to produce heat in a commercial dryer to remove moisture from the biosolids. The system can cleanly reduce biosolids volume by as much as 95%.



Feedstocks

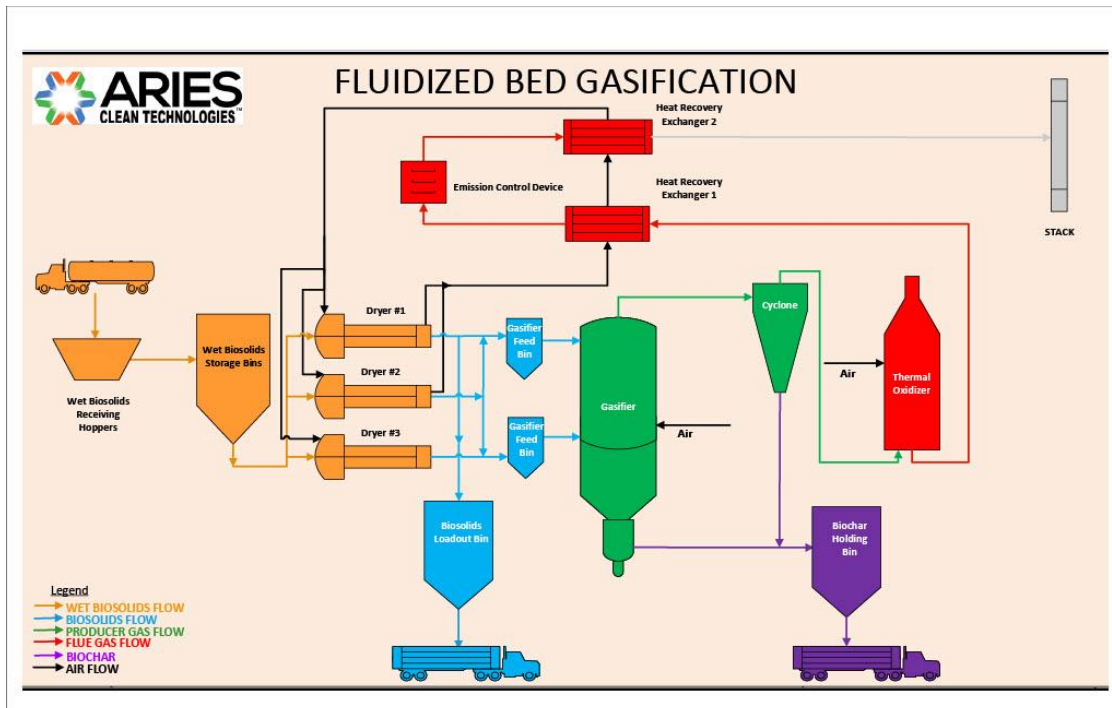
- Biosolids from municipal wastewater treatment plants
- Biomass residues from certain types of industrial manufacturing and processing operations

Beneficial Byproducts

- Clean energy – syngas, a synthetic fuel gas for industrial use, and
- Bio-Fly-Ash™ – a beneficial byproduct with various applications in industrial and manufactured products.

Sustainability Benefits

- Achieving zero landfill and/or land application goals for industry and municipalities.
- Reducing carbon footprints. New green energy production measurably offsets former use of fossil fuels. Locating a gasifier near wastewater treatment plants reduces biosolids trucking requirements, which in turn reduces CO2 generation by thousands of tons per year. These carbon and greenhouse gas reductions are calculated using EPA standards.



Energy Applications

Syngas produced by our Fluidized Bed systems can be used as the energy source to dry biosolids, utilizing conventional industrial gas-powered drying technology.

Financial Benefits

- Competitive biosolids disposal cost, including reduced tipping fees and transportation costs.
- Compliance with government regulations and avoidance of fines imposed for non-compliant disposal practices.
- Energy production (electrical or thermal) and its offset of current costs, as well as additional monetary value of utilizing sustainable/renewable power.