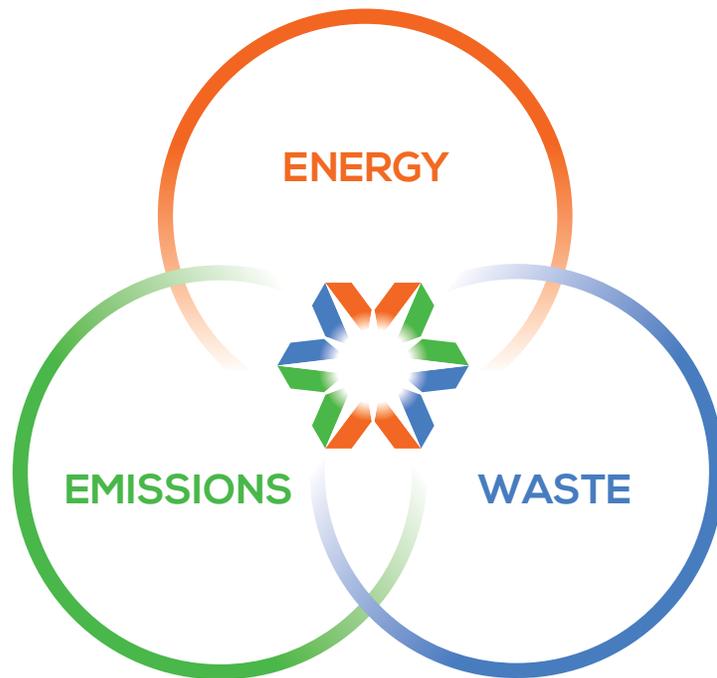




SUSTAINABLE
INNOVATIVE
SOLUTIONS



SUSTAINABLE INNOVATIVE SOLUTIONS



The sustainability strategy we offer is a three-pronged approach that considers environmental implications and the financial aspects of **waste, energy, and emissions.**

Aries Clean Energy deploys a multi-patented technology that addresses these challenges in a **turnkey gasification solution.** This approach provides proven environmental benefits, while simplifying your overall waste handling.

Our downdraft gasification process cleanly converts biomass-based waste into a synthetic fuel gas that can be used to produce electricity, or put to work in a variety of thermal processes. Fluidized bed gasification utilizes a different technology to solve biosolids disposal problems faced by municipal waste water treatment plants and industrial customers. With either deployment, emissions from your waste program are reduced, and real progress is made toward **zero landfill objectives.**

Contact us to discuss sustainable **energy** technology and clean **waste** disposal that makes **financial sense.**

Downdraft Gasification

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Fluidized Bed Gasification

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Aries Gasification Deployments

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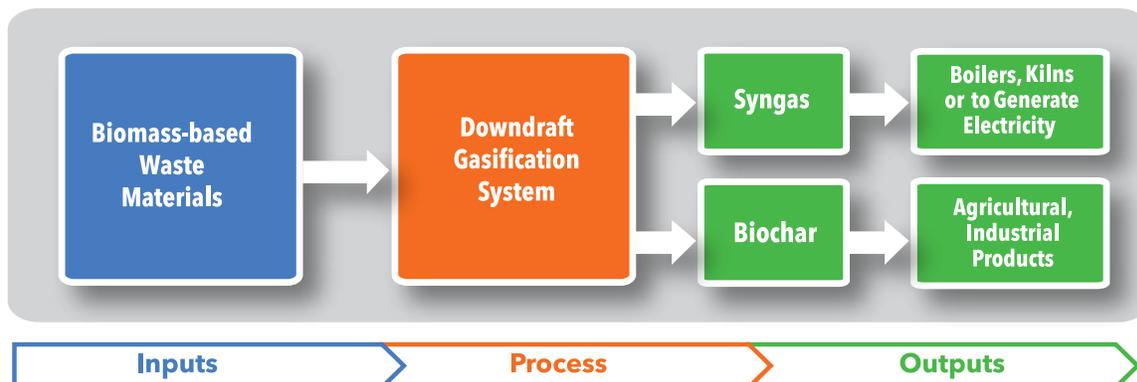
5 Things to Know About Gasification

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Downdraft Gasification

The least complex and most productive of gasification technologies, downdraft gasification has been successfully used for over 100 years. The historical limiting factor was internal mechanical structures that prevented making the equipment bigger. That problem has been eliminated in Aries Clean Energy's patented designs. The result is a process that is very straightforward with only a few moving parts inside the gasifier. Higher waste throughput has brought enhanced disposal cost savings and increased energy output.

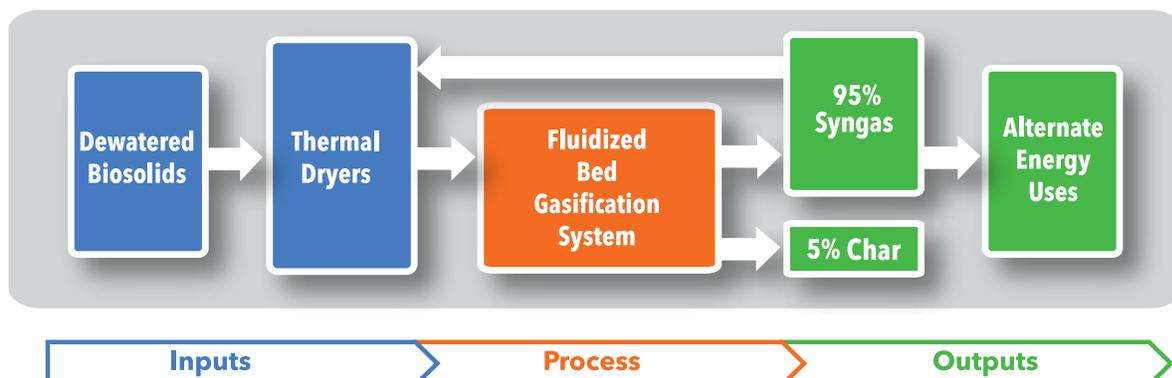
- 64 tons per day maximum waste capacity
- Synthetic gas output is excellent for thermal uses
- Systems consistently produce green electric power
- High-carbon biochar has agricultural and industrial value
- Processes wood, scrap tires, biosolids and other wastes
- Reduces landfill usage and carbon footprint
- Proven with over 50,000 hours of commercial production



Fluidized Bed Gasification

Fluidized bed gasification converts carbon-containing waste material, such as municipal biosolids or industrial sludges, into synthetic fuel gas along with a very small amount of inert ash. That sustainable fuel gas can be deployed directly into a commercial dryer to remove moisture from biosolids. The system has been proven to cleanly reduce volume by as much as 95%. An attractive alternative to conventional biosolids disposal processes such as incineration or land application, this patented technology from Aries Clean Energy makes siting facilities easier due to the clean emissions profile.

- Up to 300 wet tons per day capacity
- Synthetic gas output is excellent for thermal uses
- Systems can produce green electric power
- Reduces transportation, tipping fees, and land application costs
- Lowers carbon and greenhouse gas emissions
- Helps achieve zero landfill goals
- Designated by EPA as not an incinerator
- Proven with over 18 months of commercial operation



Deployments

Public/Private

City of Lebanon, Tennessee

- World's largest downdraft system processing up to 64 tons per day of commercial wood waste, scrap tires and municipal biosolids.
- Total electrical output of 420 kW, half of that used to power city facility.
- Positive cash flow, and keeps 8,000 tons of material out of landfills each year
- Reduces carbon emissions by 2,500 tons each year



Industrial

Boral Brick Manufacturing

- Wood waste converted to synthetic gas to offset fossil fuel usage
- Six downdraft gasifiers deployed with automatic feed system
- Equivalent BTUs cost for system 25% of natural gas



Municipal

Waste Water Treatment Plant

- First fluidized bed system installed with new patented design
- Reduced waste sludge volume by 95%
- Energy Neutral
- Eliminated land application and transport expenses



Five Things to know about **Gasification**

Landfill volume, fees, and handling costs all reduced



1

Synthetic fuel gas produced for boilers, kilns, and **green electric power** generation

2



Lower CO2 and greenhouse gas emissions



3

No burning or incineration in gasification process

4



Biochar produced has **energy, resale value**



5



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