



BIOSOLIDS CONVERSION PROCESS

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Heartland's Biosolids Conversion process sets new standards in biosolids management. Designed to address growing uncertainty faced by wastewater treatment facilities, Heartland provides a cost-effective long-term disposal solution optimizing resource recovery and delivering assured PFAS destruction.

- ✓ 95% mass reduction
- ✓ 90% carbon conversion
- ✓ Energy-neutral: drying & gasification process
- ✓ Assured PFAS Destruction

MINIMAL EMISSIONS

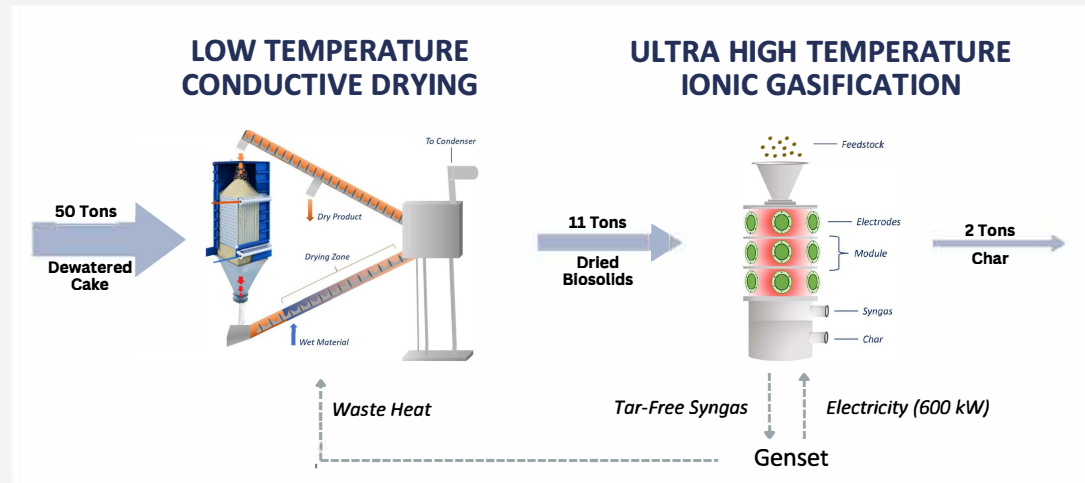
Low-temperature dryer operations result in minimal emissions and odor.

HelioStorm reduces NOx emissions, converting nitrogen directly into N₂ gas therefore eliminating the need for selective catalytic reduction (SCR) technology.

THERMAL EFFICIENCY

The process offers a more thermally efficient system. It's low temperature waste heat compatibility enables lower operating cost and minimizes risk of integration.

The Heartland process achieves 90% carbon conversion while energy neutral (gasification & dryer), depending on composition of biosolids.



HELIOSTORM PLASMA FIELD

ASSURED PFAS DESTRUCTION

The ultra-high temperature (3,000-10,000 C) ionic gasification process destroys chemical contaminants and VOCs, including destruction of perfluoroalkyl compounds (PFAS).

LTC Dry ⇌ HelioStorm

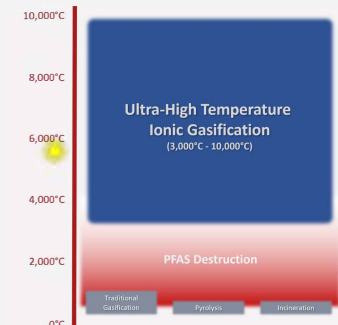
Heartland's process leverages the synergetic thermal and electrical operation of two innovative technologies to provide lowest total cost of operation for long-term disposal certainty.

PFAS FREE CHAR

PFAS-free Char that is eligible for a host of beneficial reuse outlets.

TAR FREE SYNGAS

Tar-free renewable syngas is used to generate electricity for the needs of HelioStorm without the need for a thermal oxidizer.






About

Since 2008, Heartland Water Technology has been providing innovative wastewater treatment solutions in treating challenging wastewaters, Heartland has expanded our solution offerings to include comprehensive residual and biosolids management utilizing novel ultra-high temperature ionic gasification technology. Heartland specializes in delivering turnkey tailored solutions throughout the entire wastewater treatment cycle that optimize water usage, enhance sustainability, and ensure compliance with environmental regulations.

Heartland's broad wastewater treatment experience encompasses executive management, operations, research and development, process and project engineering, business development, and project development. We offer a unique perspective, built upon a foundation of an experienced and dedicated industry-focused team, to help our clients meet today's environmental requirements, **identify new opportunities, and anticipate tomorrow's biggest challenges.**

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