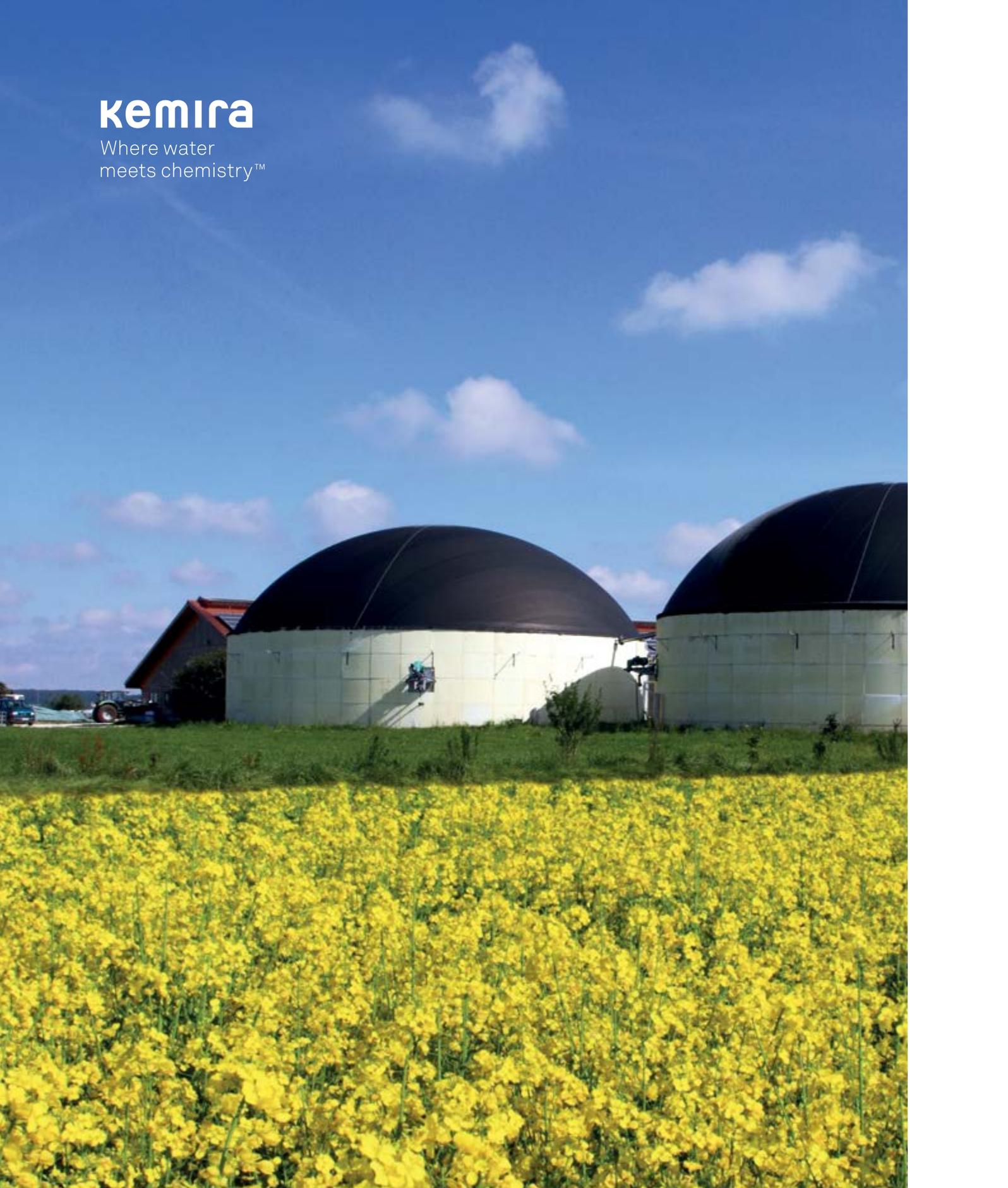


Kemira

Where water
meets chemistry™



KEMIRA BIOGAS PROGRAM

FROM WASTE TO ENERGY

CREATING ENERGY FROM WASTE STREAMS

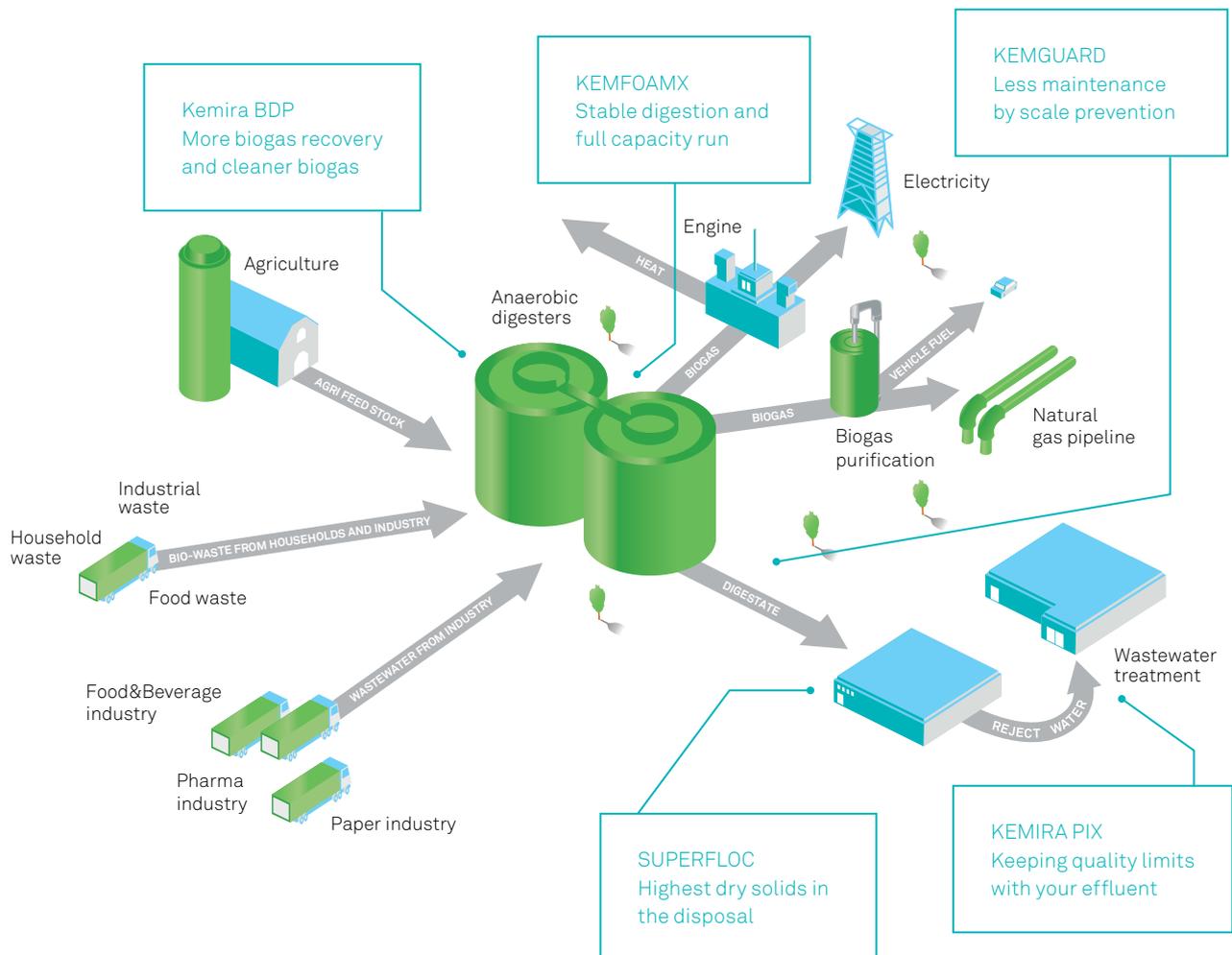
The demand for biogas production is growing. It makes use of a variety of waste and wastewater streams with organic matter to produce energy. It is an efficient way of making the most of resources, and with the help of the Kemira Biogas Program it is possible to increase biogas yield, gas quality and the cost-efficiency of waste disposal.

Biomass utilization is one of the answers to the global need to minimize our environmental footprint, and the amount organic waste in landfills, which needs to be done.

We at Kemira offer a wide range of products for each stage of the biogas production process. By innovating together we can improve your process using our expertise and chemicals.

BIOGAS

- is a renewable energy source that merges with wastewater management.
- makes use of organic waste, such as industrial or household biowaste.
- is gaining ground as a promising form of renewable energy used to create electricity, heat and to make biofuels.



WE WORK WITH YOU FROM FEED TO EFFLUENT

The variety of biogas solutions reflects the variety of waste. We can work together to find the right customizable solution to each case depending on the content of the wastewater or waste. Variables for each solution include waste or substrate composition, digestions technology, digestate treatment and gas utilization.

We are used to dealing with a variety of input streams. Whatever your waste disposal need, we are likely to have a customizable solution for enhanced biogas production.

THE BENEFITS OF WORKING WITH KEMIRA

- higher biogas yield
- improved digester capacity
- stabilized operation conditions
- cleaner biogas
- better dewaterability
- improved reject water quality

BOOSTING BIOGAS PRODUCTION

Improving the results involves increasing the efficiency of methane-forming bacteria. They are normally slow-growing and sensitive to specific conditions, which we improve with the Kemira Biogas Booster (Kemira BDP) for optimized performance. The result is a more stable process and increased biogas yield.

With tailor-made chemistry we improve the efficiency of microbes to increase the substrate load and biogas production.

TREATING THE DIGESTATE AND WASTEWATER

Biogas production creates a nutrient-rich sludge, which serves as an excellent fertilizer. Using Kemira's expertise in separating liquids and solids, this sludge is separated efficiently from the digestate. With the support of our expertise, high-quality applications and working together, we can improve water quality and enable optimal performance.





ENHANCING DIGESTER PERFORMANCE

Kemira Biogas Booster (BDP)

- enables increased digestion capacity
- increases biogas yield
- stabilizes operation conditions
- extensive BDP portfolio meets different needs of various waste, wastewater and substrates

INNOVATIVE LIQUID-SOLID SEPARATION

Superfloc polymers

Kemira PIX inorganic coagulants

- product combinations allow highest dry solids in digestate dewatering for cost-efficient disposal
- product range enables customized offerings
- reject water treatment for high effluent quality

SCALE INHIBITORS

Kemira KemGuard® antiscalants

- aqueous polymeric antiscalants inhibit precipitation of insoluble salts
- disperses silt sludges and biofilms

CONTROLLING FOAM GENERATION

Kemira KemFoamX defoamers

- full foam control in substrate intake, digestion and dewatering for full capacity run.
- broad product range includes biodegradable defoamers.

TAILOR-MADE CHEMISTRY

Each wastewater, waste or substrate is different. We know that and create chemistry for your special needs.

APPLICATION SUPPORT

We share our experience and expertise in your region with laboratory facilities to optimize your biogas system.

DISCLAIMER:

Kemira makes this information available as an accommodation to its customers and it is intended to be solely a guide in the customer's evaluation of the products. You must test our products to determine if they are suitable for your intended uses and applications, as well as from the health, safety and environmental standpoint. You must also instruct your employees, agents, contractors, customers or any third party that may be exposed to the products about all applicable precautions. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. You assume full liability and responsibility for compliance with all information and precautions, and with all laws, statutes, ordinances and regulations of any governmental authority applicable to the processing, transportation, delivery, unloading, discharge, storage, handling, sale and use of each product. Nothing herein shall be construed as a recommendation to use any product in conflict with patents covering any material or its use.

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