



## The optimal heat recovery concept for biogas plants

Waste heat recovery for increased biogas production

- Waste heat will be converted to biogas
- Internal waste heat recovery
- KWK bonus
- High profitability

## The optimal heat recovery concept

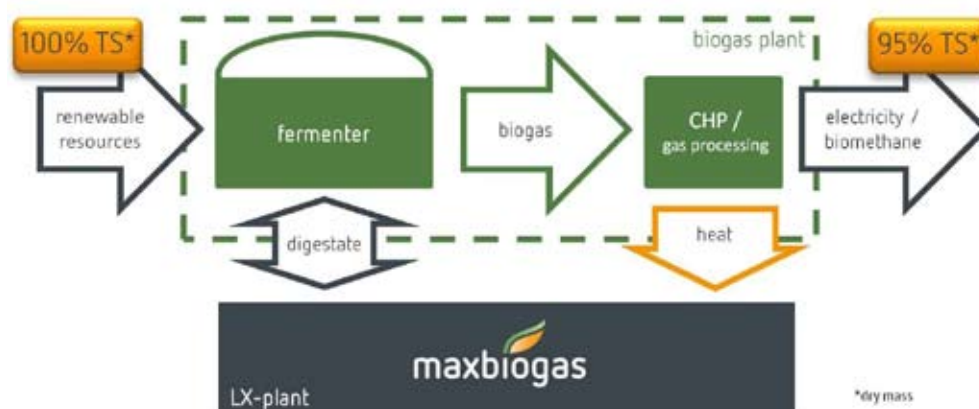
There are many ideas about heat recovery concepts of biogas plants, but no concept wins out, i.e. none of the concepts is efficient, economically successful and implementable everywhere and at any time. Maxbiogas solves this dilemma by using waste heat within the maxbiogas process to produce more biogas. In principle one can say that waste heat is transformed into biogas.

Maxbiogas LX-plants continuously use a constant time and season independent amount of heat for pre-treating plant material and then transforming it into biogas with maximum yield.

This means that the operators of biogas plants will themselves use the waste heat that is produced and will get more biogas with maxbiogas technology (up to 120% more biogas) than without! There are no outside contractors, no district heating network is required and the process will attract the full KWK-bonus.

## Technology

Maxbiogas technology is based on known processes from the paper industry. In this processes lignin is separated from cellulose. The main innovation of the maxbiogas process is based on the adaptation to the general thermal conditions of biogas plants as well as the recovery of the hemicelluloses. Processes which originally needed 150 bar and 200°C are now realised at 70°C and at normal pressure. This means, that in the maxbiogas process no additional thermal energy is required beside the waste heat from power generation or from gas purification.



The easiest application is the pre-treatment of biogas digestate. The solid parts of the digestate are mainly composed of cellulose und hemicelluloses which were not available for biogas production. The maxbiogas LX-plant pre-treats the digestate in such a way that it is transformed almost completely into biogas in the biogas plant fermenter. The energy used by the maxbiogas process is supplied by the power generation or by the gas purification of the biogas plant.

## About maxbiogas

The company maxbiogas is developing sustainable technologies and plants for renewable energies and plant resources. For more information please contact Dr. Katrin Streffer ([katrin.streffer@maxbiogas.com](mailto:katrin.streffer@maxbiogas.com)).