

NGF Nature Energy Holsted, Denmark

Biogas plant based on animal slurry, deep litter and industrial food waste

Established in 2014-15

The plant is owned by the Danish energy company NGF Nature Energy, the local farmers supplying the plant and Xergi.

The farmers main interest is to supply slurry and solid manure to the plant and to get a valuable bio-fertiliser back to replace manure and mineral fertiliser.

NGF Nature Energy wants to replace natural gas by bio-methane, and thereby contribute significantly to the Danish transition from fossil fuels to renewable energy.

The plant is designed to mainly take in slurry and deep litter from farmers, and supplement it with industrial food waste and a small part of maize silage.

Due to the amount of solid manure, the plant also has two of the robust X-choppers[®] to pre-treat

Technical Data

Gas production per year:

13 mill m³ bio-methane

Pre-treatment:

2 pcs. X-chopper[®], X-belt[®] and X-hopper[®]

Digester capacity:

Primary digester: 3 x 7,500 m³

Secondary digester: 1 x 7,500 m³
1 x 4,500 m³

Input per year:

250,000 ts pig and cattle slurry
65,000 ts deep litter
65,000 ts food waste



the deep litter before entering the digestion process.

This allows the plant to take in a considerable amount of deep litter, which increases the efficiency of the plant.

The X-chopper[®] combined with the X-hopper[®] and X-belt[®] is a very robust design that can pre-treat almost any type of solid biomasses before being fed to the biogas plant.

The deep litter is delivered into a crane bunker during the daytime.

The feeding to the system is done by an automatic operating crane working 24/7.

The produced biogas is cleaned and upgraded to biomethane.

The annual biomethane production is approx. 13 million Nm³. This corresponds to the annual consumptions of approx. 8,000 household or to run a generator set of approx. 7MWe.

The biomethane is same quality as natural gas and is compressed and fed in to the national natural gas grid.

