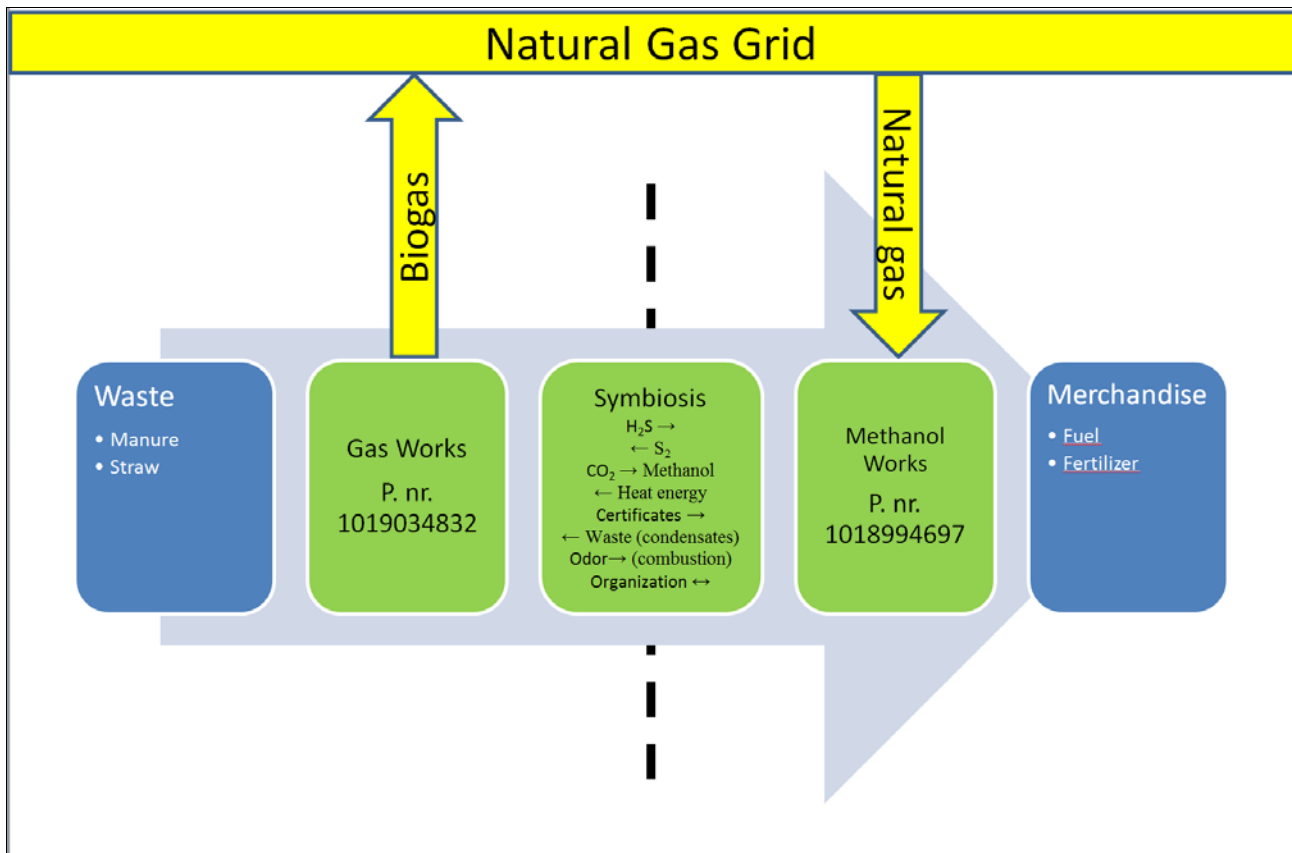


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Agriculture and Industry jointly take advantage
of the entire value chain from waste into bio-fuel.



Industrial Symbiosis

Life Cycle Assessment (LCA) of Biogas to Methanol proves significant community benefits.

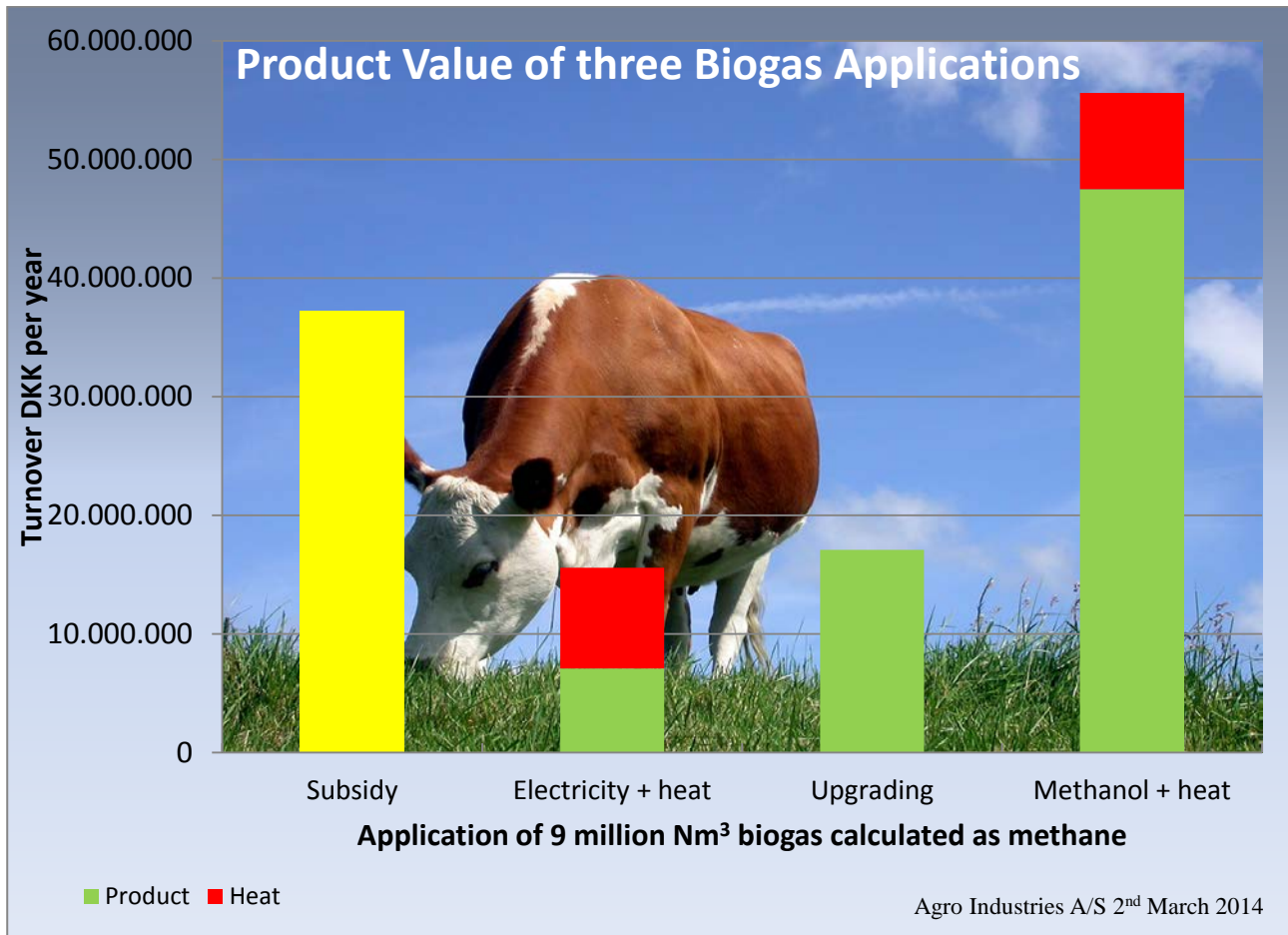
The project idea offers additional economic benefits from the processing of waste from urban and rural areas all the way to the consumer market.

The concept not only provides environmental and economic benefits for agriculture and industry, but opens the export of technology to lush equatorial regions and trade.

... it brings to the world what it needs the most – green liquid fuel for transportation.



Biogas Applications – All attracting equal subsidies.



CASE (based on NordPool Gas and Electricity Exchange closing prices as per 2nd March 2014).

Biogas Production: 9,000,000 Nm³ calculated as methane ~ 90,000 MWh (LHV)
 Biogas Subsidy: 115 DKK/GJ ~ 37.3 MDKK

Electricity Yield: 34,200 MWh á 207 DKK ~ 7.1MDKK as electricity
 37,800 MWh á 225 DKK ~ 8.5 MDKK as heat

Upgrading Yield: 90,000 MWh á 190 DKK ~ 17.1 MDKK as natural gas

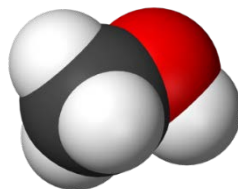
Bio-Methanol Yield: 10,000,000 l á 4,75 DKK ~ 47.5 MDKK as methanol
 36,000 MWh á 225 DKK ~ 8.1 MDKK as heat

Excess heat is applied as substrate and district heating. Upgrading does not produce any heat.

Biomethanol value exceeds subsidy making it the most robust biogas application.



Inspired by ruminants man can transform waste energy into a liquid carrier. Proven technology in a new concept paves the way for a new green agro-industry.



... member of the International Starch Group.

AGRO INDUSTRIES A/S,

Agro Food Park 13, DK 8200 Aarhus N, Denmark • T: +45 8793 0000

agro@starch.dk • www.starch.dk/agro • CVR 13250472