

A WÄRTSILÄ COMPANY

PUREGAS 
SOLUTIONS



BIOGAS IS BOOMING IN DENMARK

SWEDISH OWNED, PUREGAS SOLUTIONS, HAVE RECENTLY SUPPLIED FOUR BIOGAS UPGRADING PLANTS TO INJECT BIOMETHANE INTO THE DANISH NATURAL GAS GRID: HEMMET BIOENERGY, RYBJERG BIOGAS IN ROSLEV, GRØNGAS VRÅ - AND TO DATE THE LARGEST SINGLE UPGRADING PLANT IN THE WORLD, TO SØNDERJYSK BIOGAS.

Put into operation in April 2016, the Sønderjysk Biogas anaerobic digestion plant is located in Bevtoft - close to Vojens - and has the capacity to process over 600,000 tons of manure from local farms and additional organic waste each year.

The biogas production plant is owned and operated in a 50-50 % joint-venture between E.ON and Sønderjysk Biogas Invest A/S, which is owned by local farmers. Overall investment in the project has been over DK250m, and as part of the project, Puregas Solutions have delivered their largest upgrading plant ever with a capacity of 6,000 Nm³/h of Biogas.

The plant in Bevtoft is expected to produce around 21 million m³ of biomethane per year. This is equivalent to the annual energy consumption of over 15,000 households, 571 city buses or 10,000 cars, with an annual CO₂ reduction of 51,000 tons.

Puregas Solutions unique CAPure biogas upgrading process recovers over 99.9% of the biomethane present in the raw biogas, by chemically absorbing the CO₂ in the raw gas. The selective organic solvents used in this process are highly efficient, resulting in an end product containing more than 99% methane. The biomethane is of high enough calorific value to be directly injected into the natural gas grid without the need to enrich with propane saving significant costs.

CAPure technology achieves the highest methane recovery, reducing methane slip to below 0.1%. There is no additional cost or energy requirement associated with treating the tail gas and harmful emissions to the environment are avoided

With more than 20 years of experience Puregas provides fully integrated solutions for biogas upgrading and have over 30 plants already operating across Europe.

"We chose Puregas Solutions as supplier for the biogas upgrading plant, primarily because the integration of the plant is a key aspect of the heating system of the whole production plant, and adds to the overall total energy efficiency. Puregas Solutions also has a well proven track record from previous projects with E.ON. Puregas' solution gave the best value when considering both investment and operation over a 10 year period"

**Håkan Eriksson
Project Manager
Sønderjysk Biogas
Bevtoft A/S.**