south pole

MIDTFYN BIOGAS DENMARK

Clean renewable energy from local organic waste for the national gas grid

This project uses manure from surrounding farms and municipal waste to create biomethane, or green gas – a carbon neutral, renewable energy source. This is then fed into the national gas grid to replace fossil fuel-derived energy, in particular, natural gas extracted from the North Sea.

Around 75% of the biomass used at Midtfyn Biogas is manure, while the remaining, roughly, 25% is municipal waste, including from local restaurants and supermarkets

The Context

When organic matter, such as manure or harvest residue from agricultural and municipal waste is left to decompose freely, harmful greenhouse gases such as methane, carbon dioxide and nitrous oxide are released into the atmosphere. With the move towards a low-carbon economy more pressing than ever, biogas is a clean, climate-smart alternative to fossil fuels that can help power this transition.

The Project

Located on Funen, Denmark's third largest island, the Midtfyn Biogas project involves a co-digesting plant handling up to 500,000 tonnes of waste per year. Other than cattle manure, other sources of biomass include municipal, commercial and industrial waste. Once purified through a water scrubber, clean biogas is fed into the national gas grid as a climate-smart alternative to natural gas. The project owner, has carefully considered the social and environmental impacts of the biogas plant, which is regularly checked for gas leakages, features filters to prevent odours and clean the air, and is designed to blend into the surrounding landscape.

The Benefits

The Midtfyn Biogas project helps to reduce harmful emissions that contribute to climate change by capturing and converting greenhouse gases into a clean, alternative energy source. Additionally, the project creates a waste management system for local farmers, supporting the local agriculture sector. Biogas plants such as this one help to consolidate the renewable energy industry in Europe and contribute to low-carbon development by reducing fossil fuel dependence with a clean and viable alternative.

What is biogas?

Biogas is a renewable, low-carbon alternative fuel that can be produced locally from the anaerobic (that is without oxygen) decomposition of organic waste, including animal manure and other forms of agricultural waste. Once purified this can be compressed and used as a substitute for natural gas.

Official Name
NGF Nature Energy Midtfyn A/S

Commercial Operation Date
16 January 2016

Total capacity (in MW)
23.25 MW biogas

Quality Assurance and Verification
Measured by the local grid operator and reported to Energinet

Reportability
Annual report on input biomass to Energinet, audit report by an external accountant on Danish certificates and RED Cert Audit