US Water and Wastewater Technology Distributors Presentation March 17 2016
We help create a cleaner world for future generations

We do this by installing biogas fuelled generator sets that turn waste water into energy

We have achieved turning typically high energy consumption waste water treatment plants into energy producing plants, **exceeding 130 % electrical energy**

If you also take into account the heat produced, we are very close to **exceeding 200 % self-sufficiency**.

Our experience comes from 25 years in a highly regulated market in Denmark and by working closely together with our customers in their desire to leave a greener footprint and at the same time reduce their running cost.

Choose our products and add our consultancy

you’ll be on the path to becoming energy neutral!
NISSEN Background for being a WTA Member

NISSEN energi teknik a/s is an international sales- and service company within the energy sector.

Since 1991 we have offered professional and flexible solutions:

- Consulting, project management and construction
- Gas CHP units for production of electricity and heat
- Gascooling and cleaning systems
- Low NOx burner systems for heating and steam production
- Installation and commissioning of the products
- One service provider for the entire installation
- Spare parts and other equipment
Why is WTA and Vitus programs important for NISSEN

- Support to SME in order to realize the potential.
- Financial and organizational stronger by being in a partnership.
- Increased sales capacity
- Create work places in DK
- Support on legal aspects
Energy Neutrality on WWTP using by converting the waste to energy

- What have we obtained
- Why does WWTP in US looks towards Denmark
- Why do they chose NISSEN
- What is the potential
- What have we delivered to Glenbard
What is needed to be successful

- Quality proven products.
- Strong brand
- Listen to, and provide customer with their needs
- Be strong at the home market, and have a home market
- Right partnerships
- Take the controlled risk
Assessment of need

NISSEN energi teknik a/s offers gas engines on a scale from 50 kW to 550 kW electrical. Gas engines are supplied either as a gas engine alone, or as complete Combined Heat & Power units.

NISSEN energi teknik a/s has own production facilities for both CHP units and electrical panels, with a focus on high quality.

NISSEN energi teknik a/s can offer you co-generation units to operate on multiple types of fuels e.g.: Biogas or natural gas.
In house designers in charge of design and construction

We use Autocad Inventor to design our gas engine units, as well as the finished project.

This means that we can create 3D drawings of the entire system, as basis for the construction. This ensures, that the space at the facility is utilized optimally, while also focusing on the working environment.

We are Certified Professional Autodesk’s Inventor users.
Standard or customized solutions?

Based on the reliable **MAN gas engine** and **Stamford Generator** the unit is build on a common base frame with heat recovery from the engine and exhaust gases, as well as all necessary equipment for a **turnkey CHP**.

The electrical panel has control and power sections, with control of the coupling to the network and controls of the associated pumps and valves.

NISSEN energi teknik a/s´ engine controller **NEC Vision** gives the user full control over the CHP unit. The engine control unit can be operated locally from SCADA, internet or via app for smartphones and tablets.

The engine control unit is modular and therefore easy to customize to individual solutions.

The CHP unit can be set up in a sound enclosure container, complete with the installation of ventilation, gas supply, heating and lighting installation.

The installation will be designed to the customer's requests and needs.
Additional pieces to the puzzle

We can manage the customer's project from design idea to the final product. During the project we offer to carry out the total project management or partly, in collaboration with the client and external consultants and advisers for the implementation of the project.

We have trained personnel, who can fulfill the role of safety and health coordinates for our own technicians as well as external workers and technicians on the project.
Service packages

We offer service agreements customized according to the individual customers requests and needs. We are available 24/7 - 365 days a year.
Examples of projects...
Viby sewage treatment plant

NISSEN energi teknik a/s designed, delivered and commissioned 1 pc. 250 kW MAN E 2848 LE 322 gas engine to Aarhus Vand A/S to operate on biogas from Viby sewage treatment plant.

Incl. the delivery was also gas blower, emergency cooler, gas detection and electrical installation.

In addition NISSEN energi teknik a/s delivered, installed and commissioned 1 pc. Zantingh Unigas P61L gas burner for operating on biogas and LPG.

NISSEN energi teknik a/s are maintaining the facility.
Aalborg sewage treatment plant, West

In May 2013 NISSEN energi teknik a/s successfully completed the delivery of a brand new facility to Aalborg Forsyning, Aalborg sewage treatment plant, West.

NISSEN energi teknik a/s’ delivered a turn key installation - including construction site safety and quality management.

The delivery included:
• 3 x MAN E 2848 LE 322 Gas engines
• 3 x Complete Heat Recovery systems with connection to District Heating systems
• 3 x Ventilation Heat Recovery systems
• Complete electrical system
• 1 x Viessmann Vitoplex 200 boiler 1200 kW
• 1 x Zantingh P71 Unigas burner

NISSEN energi teknik a/s are maintaining the facility.
Crystal Palace National Sports Centre, London

For the Crystal Palace National Sports Centre, which among other things, were used as training facility for the 2012 Olympics, NISSEN energi teknik a/s has delivered, installed and started a CHP module.

The system is based on a MAN E2842LE322 gas engine at 420 kW and has an electrical output of 400 kW and 513 kW thermal output. The system was delivered as a complete module incl. a complete switchgear with NISSEN Engine Control, NEC Vision control system for controlling and monitoring the system.

NISSEN energi teknik a/s provides support and sells spare parts for the facility.
Bioenergie Gehlenberg GmbH & Co. KG

In 2014 NISSEN energi teknik a/s got yet another order from Bioenergie Gehlenberg GmbH & Co. KG in Germany - the fifth engine in the line for this customer and the first sale of the new MAN E 3262 LE 202 to 528 kW of electrical power.

NISSEN energi teknik a/s designed, supplied and installed the gas engine to operate on biogas.

Delivery included gas engines, control and power panel, silencer and emergency cooler, for installation in container. The exhaust from the gas engine is connected to a steam boiler to produce steam for the plant.

The excess heat from the gas engine is used in the process of the finished product. The biogas plant is a part of Meemken Würstwaren, which makes cold cuts and sausages.

NISSEN energi teknik a/s are servicing facilities.
CO-OPERATION is a matter of trust...

We create new energy – with value!