TEDOM

technology ... in harmony with nature

TEDOM COGENERATION UNITS IN BIOGAS PLANTS

A CHP unit is the last element of a biogas plant. Its quality and reliability often affects the ROI of the entire biogas plant technology. Many TEDOM CHP units have been installed in numerous biogas plants in the Czech Republic. Customers especially appreciate the high technical quality of our products, as well as their reliability or our professional maintenance and repair services.

BIOGAS PLANT SUCHOHRDLY

The TEDOM joint-stock company was the general building contractor for the construction of an agricultural biogas plant for the processing of corn silage and pig manure. A time-tested wet fermentation method was chosen for the production of biogas. The core of the project consists of two stainless-steel fermenters with integrated heating, mixing, and extra gas storage containers. The main components of the system include a homogenizing sump for liquid substrates, silage batchers with mixing, and tensiometers. Moisture is removed from the biogas and then burned in three CHP units. The heat generated by the engine's cooling system is used for heating the substrate and the greater portion of residue heat is used by the plant operator in livestock production. Part of the produced power is used for the purposes of the farm and the rest is supplied to the regional distribution network.

Basic Information on the Installed Unit

CHP unit type	Cento T170
Number of units	3
Fuel	biogas
Electrical output	495 kW
Heat output	600 kW
Annual power production	5 150 MWh
Annual heat production	4 250 MWh
Year of installation	2008 - 2009
Place of installation	Suchohrdly u Miroslavi, CZ
Investor	Renergie s.r.o.

The Benefits for Users of Biogas Plants with Cogeneration:

- Contractually guaranteed purchase price of electricity within tolerance for 20 years from the date the system is put into service (based on prices set by the ERU)
- Temporary income tax exemption
- Emergency operation of one of the CHP units to secure the biogas plant operation in case of grid failure
- Savings from the farm facility heating (utilization of waste heat)
- Diversification of agriculture and beneficial impacts on crop and livestock production assurance
- Sustainable crop production, fertilizer in the form of digestate, etc.

SELECTED REFERENCES FROM BIOGAS PLANTS

Biogas station Lesonice, CZ

CHP unit type: 1 x Quanto D770
Electrical output: 770 kW
Year of installation: 2009

Biogas station Hostouň, CZ

CHP unit type: 1 x Quanto D580
1 x Cento T160
Electrical output: 740 kW
Year of installation: 2009

Biogas station Čejč, CZ

CHP unit type: 2 x Quanto D580
Electrical output: 1160 kW
Year of installation: 2008

Biogas station Žihle, CZ

CHP unit type: 1 x Quanto D1200
Electrical output: 1200 kW
Year of installation: 2007

Other references:

- 6 x Cento T160 - Velké Albrechtice, CZ
- 6 x Cento T170 - Bílovec, CZ
- 2 x Cento T170 - Vladislav, CZ
- 4 x Cento T170 - Pustějov, CZ
- 3 x Cento T170 - Suchohrdly u Miroslavi, CZ
- 4 x Cento T160 - Kostelec na Hané, CZ
- 1 x Quanto D1200 - Krahulov, CZ
- 2 x Cento T160 - Kladruby, CZ
- 1 x Quanto D580 - Chroboly, CZ
- 1 x Cento T160 - 1 x Quanto D580 - Hostouň, CZ
- 2 x Quanto D580 - Částkov, CZ
- 1 x Cento T180 - Vysoká, CZ
- 2 x Cento T160 - Debrník, CZ
- 1 x Quanto D580 - 1 x Cento T180 - Přestice, CZ