Biogas Plant BELGOROD

Location:	Belgorod, Russian Federation
Construction Period:	2011/12
Input:	Corn silage, sewage sludge, slaughterhouse sludge (entrails, rests of skin and bristles, meat particles), pig manure.
Fermenter:	Glass coated steel tanks, 2 x 3,035 m³
CHP:	Gas engine 2 x 1,2 MW
Special Features:	2 primary digesters, 2 secondary digesters, gasholders above secondary digesters, mesophilic operation, energy recovery of heat.

The BELGOROD digestion plant was built and is operated by OOO ALTENERGO, it is the first industrial biogas plant constructed in the Russian Federation. Start-up was in 2012. A total amount of 80 t of corn silage, 80 m³ manure, 4 t sewage sludge and 45 t slaughter-house residues are fed into the digesters each day. The result, 19M kW of electricity are produced from 76,650 t of residues every year. This provides power to 10,000 private households. The specific biogas yield is 120 Nm³/t s.vol. The plant consists of two 16 m upright digesters with central agitator and two secondary digesters with gasholder roofs. Two feeding systems are in operation, one for the corn silage and one for the other substrates. The storage capacity for the waste input is 300 m³. Krieg & Fischer Ingenieure GmbH was responsible for the technical management of planning, construction, site supervision of construction and start-up of the biogas plant for the partner and general contractor BD AGRO.

Responsibility of Krieg & Fischer Ingenieure GmbH:
Conception, preplanning, detailed and final construction plans, local supervision of construction, start-up

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