



CASE STUDY
BIOGAS
PLANT

Effective stop for odor emissions at rebuilt biogas plant

THE COMBINATION OF OZONATION AND SELECTIVE ADSORPTION
REMOVES ALL GAS POLLUTANTS

 **ozonetech.**

VSS BIOVOIMA OY

VSS Biovoima Oy is a bioenergy company founded in 2016, active in the Säkylä industrial area – one of Finland's most important food production areas. The company produces biogas and biodiesel from a combined plant for treatment of organic residues from food industry. Their key industrial stages are a continuous dry anaerobic digestion process and a supercritical esterification process. The treatment capacity is about 20,000 tons per year of residues, producing 200 m³/h of biogas raw gas.



THE PROBLEM

Since the company was recently founded, parts of the industrial site required significant rebuilding to be adapted to the new process requirements. H₂S is a gaseous pollutant always present in biogas plants, either in the air of the ventilation system or in the biogas after the anaerobic digestion stage. VSS Biovoima Oy decided to adopt a proactive approach, installing a treatment system for preventing any H₂S and odor emissions.

PLANT FACTS

Name: VSS Biovoima Oy
Location: Säkylä, Finland
Industry: Biogas and biodiesel production plant
Air flow: 13 000 m³/hr
Purpose: H₂S with odor removal
Performance: 95 ± 2 % H₂S removal
Solution: 1x RENA Pro B-series
1x Nodora ADS

RENA Pro B-series

Dimensions (HxWxD): 1800x600x800 mm
Input power: 1.7 kW
Noise level: 55 dB

Nodora ADS

Dimensions (HxWxD): 2070x760x1160 mm

THE SOLUTION

Ozonetech was commissioned to design and install the whole treatment stage. We choose our most advanced ozone system for air treatment – the RENA Pro B-series – combined with the Nodora ADS active filter, for a final air polishing. These two systems are designed to work in synergy, maximizing the range of pollutants removed. In addition, the Nodora filter ensures low pressure drops, a very important feature when designing ventilation systems.

EVALUATION

Once more our combined system proved to keep up with the expectations. Immediately after injection, ozone started to decompose the pollutants, due to its fast reactivity. Thanks to the combination with Nodora, the final H₂S removal had an average value of 95%, ensuring no odor problems for the surroundings. Due to expected changes in the process conditions, mild variations (± 2 %) of H₂S removal were observed, confirming the effectivity of our system even in the most problematic situation.

ABOUT OZONETECH

Ozonetech is an award-winning cleantech company that has offered premium products for air and water treatment since 1993.

Our unique technology and extensive expertise has made us a rapidly growing global company with installations on six continents. All development and manufacturing is located in Sweden. In addition, we have in-house specialists for consultation, planning, installation and service.

As a Center of Excellence within air and water treatment, we also collaborate in international efforts to develop global standards for purification solutions.

At Ozonetech, we have a strong incentive to reduce energy consumption, health risks and the impact on the environment. Our current solutions provide a multitude of benefits in the processing and food industry, real estate, commercial kitchens as well as in the retail market.

For additional information, visit our website at www.ozonetech.com

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