CASE STUDY

FROM POWER EATER TO ENERGY LEADER

AERZEN makes the Liebenwalde wastewater treatment plant fit for the future.

62%
Reduction CO2 emission

55%
Less energy consumption

80%
Max. conveying rate

THE ISSUE

Energy efficiency has not been the focus so far.

Operational safety, reliability and profitability have top priority in wastewater treatment plants. Until now, energy efficiency has usually played only a secondary role, even though wastewater treatment and processing are real energy eaters. But global climate change and the associated changes are forcing plant operators to take action.

> With the energy optimisation, we have made a real quantum leap and are optimally positioned for the future."

Wolfhard Raasch
Technical Manager of the
Liebenwalde Wastewater Treatment Plant

Find your local contact.
www.aerzen.com

AERZEN

THE SOLUTION

The new, efficient, rotary lobe compressor.

Biological cleaning offers the greatest potential for savings, as 60 to 70 percent of the total energy requirement is generated by the activated sludge process.

1. For the Liebenwalde wastewater treatment plant, the investments in increasing energy efficiency and the use of renewable energies have more than paid off. The result: maximum efficiency at minimum cost. Thanks to the state subsidies, energy optimisation was made affordable and climate-friendly wastewater treatment was achieved.

2. The installation of a 100 kWp open space photovoltaic system with a battery storage system. Total area: 550 m2, performance: 110,000 kWh per year, covering one third of the electricity consumption.

3. Construction of a sewage sludge humification plant for increasing the dry substance content from 6% to 40%, reduction of recycling transports by 90%, renunciation of chemicals, minimised power consumption.

Type of technology	Rotary lobe compressor
Version	Overpressure, negative pressure
Volume flows	110 to 9,000 m^3/h
Conveying media	Air, neutral gases
Conveying	Oil-free
Negative pressure	-700 mbar
Overpressure	1,500 mbar

THE RESULT

The development from energy eater to climate leader.

Thanks to extensive energy optimisation, co-financed by state funds, the Liebenwalde wastewater treatment plant has been able to reduce its power consumption by half and its CO2 emissions by 60 percent, thus not only saving costs of €60,000 per year, but also making an important contribution to climate protection.

61,600€

cost savings/year

SUMMARY

For the Liebenwalde wastewater treatment plant, the investments in increasing energy efficiency and the use of renewable energies have more than paid off. The result: maximum efficiency at minimum cost. Thanks to the state subsidies, energy optimisation was made affordable and climate-friendly wastewater treatment was achieved.