CASE STUDY

EFFICIENT RETROFIT

AERZEN provide increased efficiency resulting in significantly lower OPEX

21 %
More energy efficient

4
Week lead-time

2.8
Payback years

THE ISSUE

Energy efficiency has not been the focus so far.

Operational efficiency and reliability should be priorities in wastewater treatment plants. Consequently, there has been a prominent focus on being more efficient and reducing carbon footprint. This WWTP treats wastewater for over eight million people. The company was working with three energy-intensive competitor blowers that no longer met today's standards, this is where AERZEN was consulted.

> It's looking like a really good installation, and it is much quieter and more efficient than the old system"

Ian Moore
Technical Director, Air Technology

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AERZEN

THE SOLUTION

Turbo technology for efficient aeration

For this replacement a detailed calculation of profitability showed a potential energy saving. All three blower units were showing significant signs of wear. Therefore, instead of an extensive and costly refurbishment, it was decided that these old units should be replaced with three new efficient AERZEN Turbo Blowers.

1. AERZEN consulted with the company Air Technology to determine the current load requirement. A detailed profitability calculation indicated energy savings of over 20%

2. AERZEN supplied 3 Turbo G5plus blowers (3 x AT150 0.8S DN250), which modernised the plant as they replaced the competitor's aging blowers that were consuming a lot of energy.

3. While these works were going on, the client involved AERZEN Rental to avoid downtime, who supplied the end user with 2 BVO 55000 skid mounted assemblies.

Type of technology	Turbo blower
Version	Positive pressure
Volume flow	360 to 8,400 m^3/h
Overpressure	1,000 mbar
Conveying media	Air, neutral gases
Conveying	Oil-free

THE RESULT

Modern technology used to reduce CO_2 emissions

The space-saving installation of the new turbo technology from the G5^{plus} series enables an efficiency gain of approx. 21% for the aeration of wastewater tanks which ultimately leads to savings in operating costs.

Additionally, in comparison to the earlier ventilation systems, the noise emissions were significantly decreased.

£21,537

Cost savings/year

SUMMARY

This wastewater treatment facility can save over £21.000 by utilising state-of-the-art technology, the AERZEN Turbo G5plus blower. AERZEN had a 4-week lead time. The calculation assumes an amortisation period of about three years. The cost and energy savings coincide with the customer's desire to reduce their carbon footprint.